Naval Facilities Engineering Command Southwest
BRAC PMO West
San Diego, CA

AIR MONITORING SUMMARY REPORT FOR PARCEL E REMEDIAL ACTION PHASE 2

HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA

February 1st, 2021 through February 28th, 2021

Approved for public release; distribution is unlimited

DCN: GLBN-0005-4332-0058

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February 1st, 2021 through February 28th, 2021

Prepared for:

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Naval Facilities Engineering Command Southwest
BRAC PMO West
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Contract Number: N62473-17-D-0005; Task Order No. N6247317F4332
DCN: GLBN-0005-4332-0058

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Acronyms and Abbreviations

AMSR .....*Air Monitoring Summary Report*

Cal/OSHA.....*California Occupational Safety and Health Administration*

Cfm……*cubic feet per minute*

CFR……*Code of Federal Regulations*

CTO……*Contract Task Order*

DMCP……*Dust Monitoring and Control Plan*

DTSC……State of California Department of Toxic Substances Control

EPA……*United States Environmental Protection Agency*

fiber/cm3……*fiber per cubic centimeter*

Gilbane……..*Gilbane Federal*

HERO……*Human and Ecological Risk Office*

HPNS……*Hunters Point Naval Shipyard*

L/min……*liters per minute*

mg/m3……..milligrams per cubic meter

Navy……*U.S. Department of the Navy*

NIOSH……*National Institute for Occupational Safety and Health*

PDR……..personal data-logging real-time

PEL……*permissible exposure limit*

PM10……*particulate matter less than 10 microns in diameter*

TSP……*total suspended particulates*

TWA……*time-weighted average*

µg/m3……*micrograms per cubic meter*

1.0 Introduction

This Air Monitoring Summary Report (AMSR) was prepared by Gilbane Federal (Gilbane) as requested by the United States Department of the Navy (Navy) under Radiological Environmental Multiple Award Contract N62473-17-D-0005, Contract Task Order (CTO) N6247317F4332. Gilbane is performing air monitoring at Hunters Point Naval Shipyard (HPNS) in accordance with the Final Dust Monitoring and Control Plan (DMCP), included as Appendix E to *Final Remedial Action Work Plan, Parcel E Remedial Action Phase 2, Hunters Point Naval Shipyard, San Francisco, California* (RAWP; Gilbane, 2019). The DMCP describes the procedures that minimize dust during work activities and requires air monitoring to ensure these procedures are effective. The DMCP helps prevent exposure of residents and construction crews to potential airborne chemicals of concern, and dust from the work area.

This summary report describes the following:

- Where and how air monitoring samples were collected.
- What test methods were used to analyze air monitoring samples.
- How air monitoring data were evaluated.

This AMSR summarizes the air monitoring activities conducted by Gilbane at HPNS from February 1st, 2021 through February 28th, 2021 and compares the results with the established action levels presented in the DMCP (Appendix E of the RAWP [Gilbane, 2019]).

2.0 Monitoring Site Locations

Air monitoring stations were deployed at one upwind and one downwind location from the work area whenever active soil handling operations were in progress. Based on past meteorological data, the prevalent wind direction at HPNS was from the west or west-southwest. The locations of Parcel E air monitoring stations are presented on Figure 2-1.

Air monitoring was performed to estimate and assess the impact of field activities. The locations of air monitoring stations were determined based on the prevailing wind direction and were modified as needed for accessibility and worker safety considerations. Wind direction was monitored daily using a windsock and confirmed with the prevalent wind direction recorded for the Hunters Point Station (KCSANFR994) published at Weather Underground (www.wunderground.com). Upwind/downwind station designations were assigned based on the prevalent wind direction. Atmospheric parameters were checked daily at www.wunderground.com (see Attachment 1). Monitoring stations remained stationary while sampling was conducted. Each monitoring station included four different monitoring systems:

1. Asbestos
2. Particulate matter less than 10 microns in diameter (PM10)
3. Total suspended particulates (TSP) and Metals (Copper, Lead, and Manganese)
4. Radiological air samplers.

3.0 Analytical Methods

3.1 Asbestos

Air samples were sampled and analyzed in accordance with National Institute for Occupational Safety and Health (NIOSH) Method 7400, from the NIOSH Manual of Analytical Methods (NIOSH, 1994). Method 7400 requires that samples be collected on three-piece cellulose ester filters fitted with conductive cowlings at a sampling rate of between 0.5 liters per minute (L/min) and 16 L/min. Each sample was collected over a period of less than 24 hours.

3.2 PM10

Filter-based PM10 data are collected to ensure the protection of public health and safety during construction operations. Filter-based PM10 data are generated by sampling with calibrated air monitoring equipment that are operated continuously over a period of time (usually 8 or 24 hours) in accordance with the U.S. Environmental Protection Agency (EPA) reference sampling method for PM10 as described in 40 CFR 50, Subpart J, during which time measurements are taken to precisely calculate the volume of air that has passed through the filter media sample. The period sampled is dependent on the duration of the work activity. The sample is then shipped to a certified analytical laboratory where the sample results are gravimetrically determined, after which the results are validated for quality assurance. In this way the precise amount of PM10 present in each cubic meter of air is determined.

3.3 TSP, Copper, Lead, and Manganese

TSP samples were collected with a high-volume (39 to 60 cubic feet per minute [cfm]) air sampler in accordance with EPA's reference sampling method for TSP, described in Title 40 Code of Federal Regulations (CFR), Part 50, Subpart B. Each sample was collected on a filter over an approximately 8 to 24-hour period (depending on the duration of the work activity). The filter was then weighed to determine the amount of TSP collected. Once the filter weight was determined, the sample was analyzed for copper and manganese in accordance with one of the IO-3 methods identified in Compendium of Methods for the Determination of Inorganic Compounds in Ambient Air (EPA, 1999), and for lead in accordance with a modified EPA Method 12.

3.4 Radionuclides of Concern

Radiological air samples were collected with a LV-1 low-volume air sampler. Air filters are counted onsite following a decay period and are compared with public air concentration limits published in 10 CFR Part 20. Radiological air sampling methods and procedures are detailed in Gilbane Radiological Procedure PR-RP-150 *Radiological Survey and Sampling* (Gilbane, 2016).

The radiological air sample is counted on a Low Background Protean WPC-9950 and analyzed for gross alpha and beta activity. The calculated airborne concentration in microcuries is then compared to the effluent concentration limit specified in Table 2 of Appendix B to 10 CFR 20. The effluent concentration of a given radionuclide in air which, if inhaled continuously over the course of a year, results in an exposure equal to the annual regulatory limit specified in 10 CFR 20.1302. The threshold for radiological effluent air monitoring samples is 10 percent of the effluent

concentration, which ensures work practices are evaluated and modified as necessary to ensure the limit is not reached.

The equipment specifications and sampling procedures have complied with the specifications provided in the regulations for the sampler, filter, accuracy, calibration, and quality assurance.

4.0 Air Monitoring Data Interpretation and Action Levels

To facilitate the comparison to project action levels, the delta between the upwind and downwind PM10 and TSP analytical results was calculated for detected values. Negative results indicating that the upwind concentration was greater than the downwind concentration, or instances where no delta was calculated due to non-detected results, are interpreted as acceptable.

The resulting deltas for PM10 and TSP and analytical data from air monitoring metals and radiological samples were compared with the threshold criteria listed in Table 4-1 reproduced from Table 1 of the approved DMCP (Appendix E of the RAWP [Gilbane, 2019]. The PM10 delta was additionally compared to the criterion taken from the *Technical Memorandum: Draft Dust Action Levels for Parcel E, Hunters Point Shipyard, San Francisco, California* (Department of Toxic Substances Control [DTSC] 2017) of 50 ug/m^3.

Table 4-1: Air Monitoring Threshold Criteria

Test Parameter	Threshold Criterion	Threshold Criteria Reference
Asbestos	0.1 fiber/cm^3	Cal/OSHA PEL
PM10	5,000 ug/m^3	Cal/OSHA PEL
TSP	0.5 mg/m^3	Basewide HPNS Level selected to minimize overall permissible dust release from sites
Copper	1.0 mg/m^3	Cal/OSHA PEL
Lead	0.050 mg/m^3	Cal/OSHA PEL
Manganese	0.200 mg/m^3	Cal/OSHA PEL
Radiological	10% of Effluent Concentration Values	Occupational and public air concentration limits for ROCs are published in 10 Code of Federal Regulations Part 20, Appendix B.

Notes:
[a] = Cal/OSHA PEL for particulates not otherwise regulated (respiratory) used for PM10.
µg/m^3 = micrograms per cubic meter
Cal/OSHA = California Division of Occupational Safety and Health Administration
fiber/cm^3 = fiber per cubic centimeter
HPNS = Hunters Point Naval Shipyard
mg/m^3 = milligrams per cubic meter
PEL = permissible exposure limit
PM10 = particulate matter less than 10 microns in diameter
TSP = total suspended particulates

5.0 Air Monitoring Results

Weather information (including ambient pressure and temperature data) is presented in the table included as Attachment 1. Data was collected from Station 1 in Parcel E and Station 2 in Parcel D-1 from February 1st to February 25th, 2021, during which Gilbane was demolishing a well pad, flattening an asphalt pile, installing entrance area with drain rock, grading, removing debris from the shoreline, offloading trucks, and compacting soil in Parcel E. Samples were not collected during periods of site inactivity, rain events, and/or while site work was limited to non-earth moving tasks. Air samples were not collected on February 3rd through February 4th, February 15th, and February 22nd through February 23rd, 2021 as there were no earth moving activities.

Construction and remediation activities conducted from February 1st through February 28th, 2021, did not result in the exceedance of the established threshold criteria, as described in detail below.

Asbestos results from February 1st through February 28th, 2021 did not exceed the project-specific screening criteria presented in Table 4-1. The results are presented as Attachment 2.

PM10 results from February 1st through February 28th, 2021 did not exceed the project-specific screening criteria presented in Table 4-1. The results are presented as Attachment 3.

TSP, lead, manganese, and copper results from February 1st through February 28th, 2021 did not exceed the project-specific screening criteria presented in Table 4-1. The results are presented as Attachments 4 and 5.

Radiological air sampling results from February 1st through February 28th, 2021 did not exceed the project-specific screening criteria presented in Table 4-1. The results are presented as Attachment 6.

Analytical laboratory reports were subjected to cursory review by the Project Chemist. No data quality issues were noted with the following exception:

- Samples collected on the 18th of February 2021 were omitted from the chain of custody shipped with the samples collected on the 17th and 18th of February of 2021 and shipped to ALS laboratory via FedEx on the 18th of February 2021.
- Upon discovery of the oversight, the laboratory was instructed to analyze the additional samples and was provided a revised COC to include with the laboratory report along with the original for the purposes of documenting the sample identifications and volumes collected. Data from the samples collected 18 February should be considered informational only.

Analytical laboratory reports are included as Attachment 7.

6.0 References

Department of Toxic Substances Control (DTSC), 2017. Draft Technical Memorandum: Dust Action Levels for Parcel E, Hunters Point. May.

National Institute for Occupational Safety and Health, (NIOSH), 1994. Manual of Analytical Methods.

United States Environmental Protection Agency (EPA), 1998. Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Ambient Air Specific Methods.

Gilbane Federal, 2014. Final Remedial Action Work Plan, Parcel E Remedial Action, Phase 2, Hunters Point Naval Shipyard, San Francisco, California. October

FIGURES

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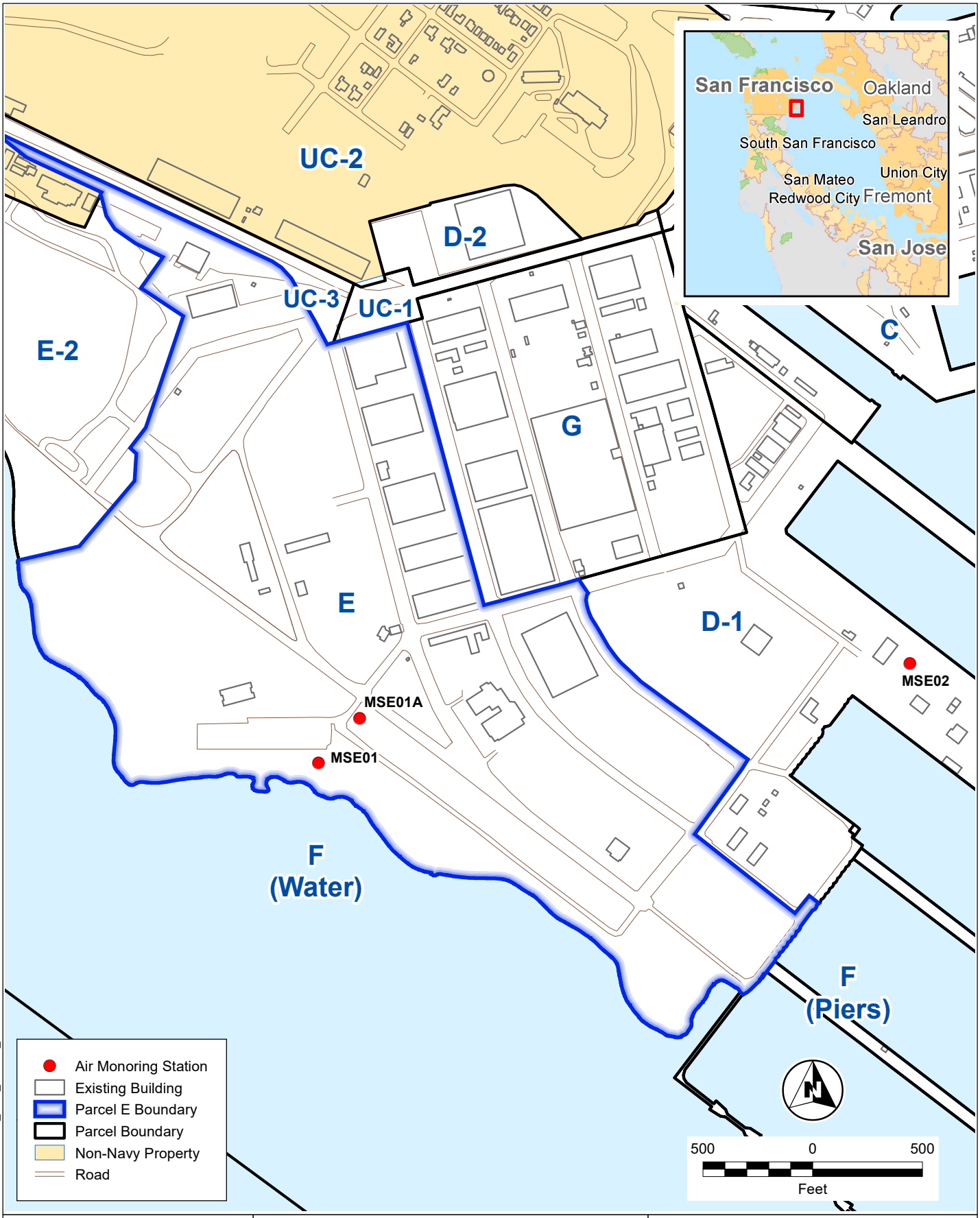

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Gilbane

Parcel E
Hunters Point Naval Shipyard
San Franscisco, California

Figure 2-1
Air Monitoring Stations

ATTACHMENTS

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ATTACHMENT 1

AMBIENT PRESSURE AND TEMPERATURE MONITORING RESULTS

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Attachment 1
Ambient Pressure, Temperature, and Prevalent Wind Direction Monitoring Results
Remedial Action Parcel E, Phase 2
Hunters Point Naval Shipyard, San Francisco, California

Start Date	Ambient Pressure (in Hg)	Ambient Temperature (°F)	Prevalent Wind Direction
2/2/2021	30.07	55.21	SW
2/3/2021	30.21	51.51	SW
2/9/2021	30.04	51.36	SW
2/10/2021	30.10	52.12	SW
2/11/2021	30.15	52.18	SW
2/17/2021	30.21	50.81	NW
2/18/2021	30.29	53.07	SW
2/25/2021	30.29	59.41	N

Notes:

Data collected using wunderground.com from Hunters Point Station - KCASANSFR994 through 2/24/2021 at which point the station went offline. Starting 2/25/2021, data was collected from APTIM HPNS - KCASANFR1504.

°F = degree Fareheit

in Hg = inches of mercury

E = East

N = North

S = South

W = West

ATTACHMENT 2

ASBESTOS MONITORING RESULTS

Attachment 2
Asbestos Monitoring Results
Remedial Action Parcel E, Phase 2
Hunters Point Naval Shipyard, San Francisco, California

Sample, Date and Station Information			Sampler Run Information		Asbestos Fibers		
Sample ID	Sample Start Date[1]	Monitoring Station	Duration of Run (min)	Total Air Volume Monitored (L)	Asbestos (fibers)	Conc Asbestos (fibers/cm^3)	Exceedance (Yes/No)
MSE01-020121	02/01/21	1	631	1262	14.5	0.006	No
MSE02-020121	02/01/21	2	630	1260	14.5	0.006	No
MSE01-020221	02/02/21	1	781	1562	9.0	0.003	No
MSE02-020221	02/02/21	2	713	1426	9.0	0.003	No
MSE01-020821	02/08/21	1	432	864	15.0	0.009	No
MSE02-020821	02/08/21	2	382	764	10.0	0.006	No
MSE01-020921	02/09/21	1	473	946	12.0	0.006	No
MSE02-020921	02/09/21	2	447	894	10.5	0.006	No
MSE01-021021	02/10/21	1	467	934	10.5	0.006	No
MSE02-021021	02/10/21	2	449	898	9.5	0.005	No
MSE01-021121	02/11/21	1	346	692	11.5	0.008	No
MSE02-021121	02/11/21	2	370	740	11.5	0.008	No
MSE01-021621	02/16/21	1	471	942	10.5	0.005	No
MSE02-021621	02/16/21	2	467	934	11.0	0.006	No
MSE01-021721	02/17/21	1	462	924	12.5	0.007	No
MSE02-021721	02/17/21	2	465	930	12.0	0.006	No
MSE01-022521	02/25/21	1	290	580	8.5	0.007	No
MSE02-022521	02/25/21	2	279	558	9.0	0.008	No

Notes:
Samples analyzed by A&B Labs
Sample locations are shown on Figure 2-1
min = minutes
L = liter
fibers/cm^3 = fibers per cubic centimeter

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ATTACHMENT 3

PM10 MONITORING RESULTS

Attachment 3
Particulate Matter, Smaller than Ten Microns (PM10) Monitoring Results
Remedial Action Parcel E, Phase 2
Hunters Point Naval Shipyard, San Francisco, California

Sample, Date and Station Information			Sampler Run Information	PM10s							
Sample ID	Monitoring Station	Sample Start Date[1]	Total Air Volume Monitored (m^3)	Total Mass (mg)	Concen-tration in Air (mg/m^3)	Delta between Downwind and Upwind (mg/m^3)	Delta between Downwind and Upwind (ug/m^3)	Cal/OSHA PEL (ug/m^3)	Exceedance (Yes/No)	HERO Action Level[2] (ug/m^3)	Exceedance (Yes/No)
Q0374024-MSE01	1	2/2/21	1540.31	28	0.018				No		No
Q0374025-MSE02	2	2/2/21	797.68	29	0.036	0.018	18.0	5,000	No	50	No
Q0374026-MSE01	1	2/3/21	1622.16	32	0.019				No		No
Q0374027-MSE02	2	2/3/21	1738.49	26	0.015	-0.004	-4.0	5,000	No	50	No
Q0424220-MSE01	1	2/9/21	1587.62	34	0.021				No		No
Q0424221-MSE02	2	2/9/21	1615.57	33	0.021	0.000	0.0	5,000	No	50	No
Q0424222-MSE01	1	2/10/21	1626.89	22	0.013				No		No
Q0424223-MSE02	2	2/10/21	1625.95	26	0.016	0.003	3.0	5,000	No	50	No
Q0424224-MSE01	1	2/11/21	1662.29	20	0.012				No		No
Q0424225-MSE02	2	2/11/21	1643.44	15	0.0093	-0.003	-2.7	5,000	No	50	No
Q0424226-MSE01	1	2/11/21	396.53	1.1	0.0028				No		No
Q0424227-MSE02	2	2/11/21	421.15	5.8	0.014	0.011	11.2	5,000	No	50	No
Q0424228-MSE01	1	2/17/21	1652.14	38	0.023				No		No
Q0424229-MSE02	2	2/17/21	1627.36	34	0.021	-0.002	-2.0	5,000	No	50	No
Q0424230-MSE01	1	2/18/21	1629.40	17	0.011				No		No
Q0424231-MSE02	2	2/18/21	1625.70	24	0.014	0.003	3.0	5,000	No	50	No
Q0424233-MSE01	1	2/18/21	437.03	4.1	0.0093				No		No
Q0424232-MSE02	2	2/18/21	436.49	1.8	0.0042	-0.005	-5.1	5,000	No	50	No
Q0424234-MSE01	1	2/25/21	1760.10	17	0.0097				No		No
Q0424235-MSE02	2	2/25/21	1787.84	32	0.018	0.008	8.3	5,000	No	50	No

Notes:

[1]Air sample was not collected on days with rain or when contaminated soil was not disturbed.

[2]PM10 data is additionally compared to the recommended dust action level of 50 ug/m^3 for total PM10 in accordance with the DTSC Human and Ecological Risk Office (HERO) Parcel E Memorandum dated April 29, 2019 (DTSC, 2019) for informational purposes only.

Samples analyzed by ALS Environmental

Sample locations are shown on Figure 2-1

DTSC = Department of Toxic Substances Control

m^3 = cubic meters

mg = milligrams

mg/m^3 = milligrams per cubic meter

PM_{10}-particulate matter smaller than 10 microns in diameter

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ATTACHMENT 4

TSP MONITORING RESULTS

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Attachment 4
Total Suspended Particulates Monitoring Results
Remedial Action Parcel E, Phase 2
Hunters Point Naval Shipyard, San Francisco, California

Sample, Date and Station Information			Sampler Run Information	Total Suspended Particulates				
Sample ID	Monitoring Station	Sample Start Date[1]	Total Air Volume Monitored (m^3)	Total Mass (mg)	Concen-tration in Air (mg/m^3)	Delta between Downwind and Upwind (mg/m^3)	Basewide HPNS Level (mg/m^3)	Exceedance (Yes/No)
9764111-MSE01	1	2/2/21	1561.21	20	0.013			No
9764112-MSE02	2	2/2/21	775.63	23	0.029	0.016	0.5	No
9764113-MSE01	1	2/3/21	1639.15	20	0.012			No
9764114-MSE02	2	2/3/21	1597.50	22	0.014	0.002	0.5	No
9894218-MSE01	1	2/9/21	1627.08	47	0.029			No
9894219-MSE02	2	2/9/21	1534.61	43	0.028	-0.001	0.5	No
9894220-MSE01	1	2/10/21	1660.37	22	0.013			No
9894221-MSE02	2	2/10/21	1588.13	29	0.018	0.005	0.5	No
9894222-MSE01	1	2/11/21	1695.47	25	0.015			No
9894223-MSE02	2	2/11/21	1627.52	32	0.02	0.005	0.5	No
9894224-MSE01	1	2/11/21	401.95	13	0.033			No
9894225-MSE02	2	2/11/21	421.33	13	0.03	-0.003	0.5	No
9894227-MSE01	1	2/17/21	1682.27	51	0.03			No
9894226-MSE02	2	2/17/21	1624.69	45	0.028	-0.002	0.5	No
9894228-MSE01	1	2/18/21	1653.01	37	0.022			No
9894229-MSE02	2	2/18/21	1612.80	37	0.023	0.001	0.5	No
9894230-MSE01	1	2/18/21	449.71	4.5	0.01			No
9894231-MSE02	2	2/18/21	434.14	11	0.026	0.016	0.5	No
9894232-MSE01	1	2/25/21	1750.92	28	0.016			No
9764115-MSE02	2	2/25/21	1808.23	44	0.024	0.008	0.5	No

Notes:
[1]Air sample was not collected on days with rain or when contaminated soil was not disturbed.
Samples analyzed by ALS Environmental
Sample locations are shown on Figure 2-1
-- indicates difference was not calculated
< = below detection limit
HPNS = Hunters Point Naval Shipyard
mg = milligrams
mg/m^3 = milligrams per cubic meter
m^3 = cubic meters
NA = not applicable
ug = micrograms

ATTACHMENT 5

COPPER, LEAD, AND MANGANESE MONITORING RESULTS

Attachment 5
Copper, Lead, and Manganese Monitoring Results
Remedial Action Parcel E, Phase 2
Hunters Point Naval Shipyard, San Francisco, California

Sample, Date and Station Information			Sampler Run Information	Copper			Lead			Manganese		
Sample ID	Monitoring Station	Sample Start Date[1]	Total Air Volume Monitored (m^3)	Result (ug)	Concen-tration in Air (mg/m^3)	Exceedance (Yes/No)	Result (ug)	Concen-tration in Air (mg/m^3)	Exceedance (Yes/No)	Result (ug)	Concen-tration in Air (mg/m^3)	Exceedance (Yes/No)
9764111-MSE01	1	2/2/21	1561.21	230	0.00015	No	ND	<0.000016	No	ND	<0.000064	No
9764112-MSE02	2	2/2/21	775.63	ND	<0.00013	No	ND	<0.000032	No	ND	<0.00013	No
9764113-MSE01	1	2/3/21	1639.15	420	0.00026	No	ND	<0.000015	No	ND	<0.000061	No
9764114-MSE02	2	2/3/21	1597.50	110	0.000072	No	ND	<0.000016	No	ND	<0.000063	No
9894218-MSE01	1	2/9/21	1627.08	370	0.00023	No	ND	<0.000015	No	ND	<0.000061	No
9894219-MSE02	2	2/9/21	1534.61	180	0.00012	No	ND	<0.000016	No	ND	<0.000065	No
9894220-MSE01	1	2/10/21	1660.37	490	0.0003	No	ND	<0.000015	No	ND	<0.000015	No
9894221-MSE02	2	2/10/21	1588.13	240	0.00015	No	ND	<0.000016	No	ND	<0.000016	No
9894222-MSE01	1	2/11/21	1695.47	830	0.00049	No	ND	<0.000015	No	ND	<0.000015	No
9894223-MSE02	2	2/11/21	1627.52	230	0.00014	No	ND	<0.000015	No	ND	<0.000015	No
9894224-MSE01	1	2/11/21	401.95	160 J-	0.00039 J-	No	ND	<0.000062	No	ND	<0.00025	No
9894225-MSE02	2	2/11/21	421.33	ND	<0.00024	No	ND	<0.000059	No	ND	<0.00024	No
9894227-MSE01	1	2/17/21	1682.27	530	0.00032	No	ND	<0.000015	No	ND	<0.000059	No
9894226-MSE02	2	2/17/21	1624.69	220	0.00013	No	ND	<0.000015	No	ND	<0.000062	No
9894228-MSE01	1	2/18/21	1653.01	1,200	0.00072	No	ND	<0.000015	No	ND	<0.000060	No
9894229-MSE02	2	2/18/21	1612.80	240	0.00015	No	ND	<0.000016	No	ND	<0.000062	No
9894230-MSE01	1	2/18/21	449.71	120	0.00028	No	ND	<0.000056	No	ND	<0.000056	No
9894231-MSE02	2	2/18/21	434.14	110	0.00026	No	ND	<0.000058	No	ND	<0.000058	No
9894232-MSE01	1	2/25/21	1750.92	340	0.00019	No	ND	<0.000014	No	36	0.000021	No
9764115-MSE02	2	2/25/21	1808.23	710	0.00039	No	ND	<0.000014	No	35	0.00002	No

Notes:
[1]Air sample was not collected on days with rain or when contaminated soil was not disturbed.
Samples analyzed by ALS Environmental
Sample locations are shown on Figure 2-1
J - = result is estimated with a low bias
mg = milligrams
mg/m^3 = milligrams per cubic meter
< = below detection limit
m^3 = cubic meters
ug = micrograms

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ATTACHMENT 6

RADIOLOGICAL AIR MONITORING RESULTS

Gilbane

AIR SAMPLE RESULTS - PUBLIC EXPOSURE MONITORING

Project Information		
Contract / Task Order Number:	Project Title / Location:	Gilbane Project Number:
N62473-17-D-0005 / F4332	Parcel E RA HPNS, SF, CA	J310000400
Information effective as of: 3/17/2021		

Effluent Air Concentration		
	Alpha	Beta
Radionuclide	Ra-226	Sr-90
Effluent Conc (µCi/ml)	9.E-13	6.E-12

Sampling Period
Air samples collected between February 1, 2020 and February 28, 2020

Color Codes	
Value < MDC	Value < 0.1 x Effluent Conc
< 72 hr decay time	Value > 0.1 x Effluent Conc
Data reviewed	Value > Effluent Conc

Sample Collection									Count Information								Sample Results				Initials	
Sample Number	Sample Type	Sample Location	Equip No	Ave Flow Rate (lpm)	Start Day Time	End Date Time	Elapsed Time (min)	Volume (ml)	Inst No	Count Date	Time (min)	Counting Units	Gross Activity		Net dpm		Activity (µCi/ml)		Effluent Conc (%)		Count Tech	Data Reviewer
													Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta		
AS-0083	Perimeter	MSC02	PE05	60	2/1/21 8:25	2/1/21 15:10	405	2.4E+07	C	2/9/21	1	cpm	0.100	4.250	0.3	8.7	5.2E-15	1.6E-13	***0.6%***	***2.7%***	*DVT*	*CB*
AS-0084	Perimeter	MSC01	PE06	55	2/1/21 8:40	2/1/21 15:15	395	2.2E+07	C	2/9/21	1	cpm	0.200	4.450	0.6	9.2	1.2E-14	1.9E-13	***1.3%***	***3.2%***	*DVT*	*CB*
AS-0085	Perimeter	MSC02	PE05	60	2/2/21 6:45	2/2/21 13:05	380	2.3E+07	C	2/9/21	1	cpm	0.150	3.700	0.4	7.1	8.3E-15	1.4E-13	***0.9%***	***2.3%***	*DVT*	*CB*
AS-0086	Perimeter	MSC01	PE06	55	2/2/21 6:38	2/2/21 15:00	502	2.8E+07	C	2/9/21	1	cpm	0.300	3.750	0.8	7.2	1.4E-14	1.2E-13	***1.5%***	***2.0%***	*DVT*	*CB*
AS-0087	Perimeter	MSC01	PE06	55	2/3/21 7:00	2/3/21 15:35	515	2.8E+07	C	2/9/21	1	cpm	0.150	3.150	0.4	5.5	6.7E-15	8.8E-14	***0.7%***	***1.5%***	*DVT*	*CB*
AS-0088	Perimeter	MSC02	PE05	55	2/3/21 6:55	2/3/21 15:30	515	2.8E+07	C	2/9/21	1	cpm	0.100	3.300	0.3	6.0	4.5E-15	9.5E-14	***0.5%***	***1.6%***	*DVT*	*CB*
AS-0089	Perimeter	MSC01	PE06	55	2/4/21 6:50	2/4/21 14:29	459	2.5E+07	C	2/9/21	1	cpm	0.050	3.750	0.1	7.2	2.5E-15	1.3E-13	***0.3%***	***2.2%***	*DVT*	*CB*
AS-0090	Perimeter	MSC02	PE05	55	2/4/21 6:41	2/4/21 14:45	484	2.7E+07	C	2/9/21	1	cpm	0.150	3.500	0.4	6.5	7.1E-15	1.1E-13	***0.8%***	***1.8%***	*DVT*	*CB*
AS-0091	Perimeter	MSC01	PE06	55	2/8/21 7:30	2/8/21 15:00	450	2.5E+07	C	2/17/21	1	cpm	0.250	4.950	0.7	10.7	1.3E-14	1.9E-13	***1.4%***	***3.2%***	*DVT*	*CB*
AS-0092	Perimeter	MSC02	PE05	55	2/8/21 7:01	2/8/21 15:05	484	2.7E+07	C	2/17/21	1	cpm	0.250	4.050	0.7	8.1	1.2E-14	1.4E-13	***1.3%***	***2.3%***	*DVT*	*CB*
AS-0093	Perimeter	MSC01	PE06	55	2/9/21 6:58	2/9/21 15:30	512	2.8E+07	C	2/17/21	1	cpm	0.050	4.400	0.1	9.1	2.2E-15	1.5E-13	***0.2%***	***2.4%***	*DVT*	*CB*
AS-0094	Perimeter	MSC02	PE05	55	2/9/21 7:05	2/9/21 15:35	510	2.8E+07	C	2/17/21	1	cpm	0.150	3.650	0.4	7.0	6.8E-15	1.1E-13	***0.8%***	***1.9%***	*DVT*	*CB*
AS-0095	Perimeter	MSC01	PE06	55	2/10/21 6:38	2/10/21 15:15	517	2.8E+07	C	2/17/21	1	cpm	0.200	4.450	0.6	9.2	8.9E-15	1.5E-13	***1.0%***	***2.4%***	*DVT*	*CB*
AS-0096	Perimeter	MSC02	PE05	55	2/10/21 6:44	2/10/21 15:30	526	2.9E+07	C	2/17/21	1	cpm	0.100	4.450	0.3	9.2	4.4E-15	1.4E-13	***0.5%***	***2.4%***	*DVT*	*CB*
AS-0097	Perimeter	MSC01	PE06	55	2/11/21 6:48	2/11/21 14:00	432	2.4E+07	C	2/17/21	1	cpm	0.100	3.800	0.3	7.4	5.3E-15	1.4E-13	***0.6%***	***2.3%***	*DVT*	*CB*
AS-0098	Perimeter	MSC02	PE05	55	2/11/21 6:56	2/11/21 14:05	429	2.4E+07	C	2/17/21	1	cpm	0.000	4.250	0.0	8.7	0.0E+00	1.7E-13	***0.0%***	***2.8%***	*DVT*	*CB*
AS-0099	Perimeter	MSC01	PE06	55	2/15/21 7:38	2/15/21 15:40	482	2.7E+07	C	2/22/21	1	cpm	0.150	4.500	0.4	9.4	7.2E-15	1.6E-13	***0.8%***	***2.7%***	*DVT*	*CB*
AS-0100	Perimeter	MSC02	PE05	55	2/15/21 7:19	2/15/21 15:30	491	2.7E+07	C	2/22/21	1	cpm	0.100	3.950	0.3	7.8	4.7E-15	1.3E-13	***0.5%***	***2.2%***	*DVT*	*CB*
AS-0101	Perimeter	MSC01	PE06	60	2/16/21 6:28	2/16/21 15:30	542	3.3E+07	C	2/22/21	1	cpm	0.150	3.350	0.4	6.1	5.8E-15	8.5E-14	***0.6%***	***1.4%***	*DVT*	*CB*
AS-0102	Perimeter	MSC02	PE05	60	2/16/21 6:58	2/16/21 15:40	522	3.1E+07	C	2/22/21	1	cpm	0.100	4.450	0.3	9.2	4.0E-15	1.3E-13	***0.4%***	***2.2%***	*DVT*	*CB*
AS-0103	Perimeter	MSC01	PE06	60	2/17/21 6:30	2/17/21 15:23	533	3.2E+07	C	2/22/21	1	cpm	0.050	4.350	0.1	8.9	2.0E-15	1.3E-13	***0.2%***	***2.1%***	*DVT*	*CB*
AS-0104	Perimeter	MSC02	PE05	60	2/17/21 6:35	2/17/21 15:30	535	3.2E+07	C	2/22/21	1	cpm	0.200	3.750	0.6	7.2	7.9E-15	1.0E-13	***0.9%***	***1.7%***	*DVT*	*CB*
AS-0105	Perimeter	MSC01	PE06	60	2/18/21 6:20	2/18/21 14:20	480	2.9E+07	C	2/22/21	1	cpm	0.150	5.650	0.4	12.6	6.6E-15	2.0E-13	***0.7%***	***3.3%***	*DVT*	*CB*
AS-0106	Perimeter	MSC02	PE05	60	2/18/21 6:30	2/18/21 14:30	480	2.9E+07	C	2/22/21	1	cpm	0.000	4.150	0.0	8.4	0.0E+00	1.3E-13	***0.0%***	***2.2%***	*DVT*	*CB*
AS-0107	Perimeter	MSC01	PE06	60	2/22/21 6:50	2/22/21 17:35	645	3.9E+07	C	3/4/21	1	cpm	0.150	4.650	0.4	9.8	4.9E-15	1.1E-13	***0.5%***	***1.9%***	*DVT*	*CB*
AS-0108	Perimeter	MSC02	PE05	60	2/22/21 7:15	2/22/21 17:30	615	3.7E+07	C	3/4/21	1	cpm	0.050	3.700	0.1	7.1	1.7E-15	8.7E-14	***0.2%***	***1.4%***	*DVT*	*CB*
AS-0109	Perimeter	MSC01	PE06	60	2/23/21 6:30	2/23/21 15:30	540	3.2E+07	C	3/4/21	1	cpm	0.150	4.850	0.4	10.4	5.9E-15	1.4E-13	***0.7%***	***2.4%***	*DVT*	*CB*
AS-0110	Perimeter	MSC02	PE05	60	2/23/21 6:44	2/23/21 15:45	541	3.2E+07	C	3/4/21	1	cpm	0.150	3.300	0.4	6.0	5.8E-15	8.3E-14	***0.6%***	***1.4%***	*DVT*	*CB*
AS-0111	Perimeter	MSC01	PE06	60	2/24/21 6:22	2/24/21 15:10	528	3.2E+07	C	3/4/21	1	cpm	0.200	4.700	0.6	9.9	8.0E-15	1.4E-13	***0.9%***	***2.4%***	*DVT*	*CB*
AS-0112	Perimeter	MSC02	PE05	60	2/24/21 6:30	2/24/21 15:15	525	3.1E+07	C	3/4/21	1	cpm	0.200	4.200	0.6	8.5	8.0E-15	1.2E-13	***0.9%***	***2.0%***	*DVT*	*CB*

Gilbane

AIR SAMPLE RESULTS - PUBLIC EXPOSURE MONITORING

Project Information			Effluent Air Concentration			Sampling Period	Color Codes	
Contract / Task Order Number:	Project Title / Location:	Gilbane Project Number:		Alpha	Beta	Air samples collected	Value < MDC	Value < 0.1 x Effluent Conc
N62473-17-D-0005 / F4332	Parcel E RA HPNS, SF, CA	J310000400	Radionuclide	Ra-226	Sr-90	between February 1, 2020	< 72 hr decay time	Value > 0.1 x Effluent Conc
Information effective as of: 3/17/2021			Effluent Conc (µCi/ml)	9.E-13	6.E-12	and February 28, 2020	Data reviewed	Value > Effluent Conc

Sample Collection									Count Information								Sample Results				Initials	
Sample Number	Sample Type	Sample Location	Equip No	Ave Flow Rate (lpm)	Start Day Time	End Date Time	Elapsed Time (min)	Volume (ml)	Inst No	Count Date	Time (min)	Counting Units	Gross Activity		Net dpm		Activity (µCi/ml)		Effluent Conc (%)		Count Tech	Data Reviewer
													Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta		
AS-0113	Perimeter	MSC01	PE06	60	2/25/21 6:25	2/25/21 10:25	240	1.4E+07	C	3/4/21	1	cpm	0.100	3.550	0.3	6.7	8.8E-15	2.1E-13	***1.0%***	***3.5%***	*DVT*	*CB*
AS-0114	Perimeter	MSC02	PE05	60	2/25/21 6:30	2/25/21 10:30	240	1.4E+07	C	3/4/21	1	cpm	0.100	3.950	0.3	7.8	8.8E-15	2.4E-13	***1.0%***	***4.1%***	*DVT*	*CB*

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ATTACHMENT 7

LABORATORY REPORTS

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16-Feb-2021

[redacted]
Gilbane Company
[redacted]
[redacted]

Re: **HPNS Parcel E-2; J310000400** Work Order: **21020200**

Dear Brett,

ALS Environmental received 8 samples on 05-Feb-2021 09:50 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 12.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

[redacted]
Electronically approved by: Rob Nieman

[redacted]
Project Manager

Report of Laboratory Analysis

ALS Environmental

Date: 16-Feb-21

Client: Gilbane Company
Project: HPNS Parcel E-2; J310000400
Work Order: **21020200**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
21020200-01	Q0374024-MSE01	Air		2/2/2021 07:30	2/5/2021	☐
21020200-02	9764111-MSE01	Air		2/2/2021 07:30	2/5/2021	☐
21020200-03	Q0374025-MSE02	Air		2/2/2021 08:05	2/5/2021	☐
21020200-04	9764112-MSE02	Air		2/2/2021 08:05	2/5/2021	☐
21020200-05	Q0374026-MSE01	Air		2/3/2021 07:30	2/5/2021	☐
21020200-06	9764113-MSE01	Air		2/3/2021 07:30	2/5/2021	☐
21020200-07	Q0374027-MSE02	Air		2/3/2021 07:50	2/5/2021	☐
21020200-08	9764114-MSE02	Air		2/3/2021 07:50	2/5/2021	☐

Client:	Gilbane Company
Project:	HPNS Parcel E-2; J310000400
Work Order:	21020200

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

All sampling information was provided by the client.

ALS Environmental

Date: *16-Feb-21*

Client: Gilbane Company
Project: HPNS Parcel E-2; J310000400

Work Order: 21020200

Analytical Results

Lab ID: 21020200-01A
Collection Date: 2/2/2021 7:30:00 AM
Client Sample ID: Q0374024-MSE01
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1540310**	Analyst: **SRL**
Date Analyzed: 2/12/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**28**	**1.0**	**0.018**	

Lab ID: 21020200-02A
Collection Date: 2/2/2021 7:30:00 AM
Client Sample ID: 9764111-MSE01
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1561210**	Analyst: **SRL**
Date Analyzed: 2/12/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**20**	**1.0**	**0.013**	
METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1561210**	Analyst: **AZ**
Date Analyzed: 2/14/2021 19:17		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**230**	**100**	**0.00015**	
Lead	ND	25	<0.000016	
Manganese	ND	100	<0.000064	

Lab ID: 21020200-03A
Collection Date: 2/2/2021 8:05:00 AM
Client Sample ID: Q0374025-MSE02
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **797680**	Analyst: **SRL**
Date Analyzed: 2/12/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**29**	**1.0**	**0.036**	

Note:

Client: Gilbane Company **Work Order:** 21020200
Project: HPNS Parcel E-2; J310000400

Analytical Results

Lab ID: 21020200-04A **Collection Date:** 2/2/2021 8:05:00 AM
Client Sample ID: 9764112-MSE02 **Matrix:** AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **775630**	Analyst: **SRL**
Date Analyzed: 2/12/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**23**	**1.0**	**0.029**	
METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **775630**	Analyst: **AZ**
Date Analyzed: 2/14/2021 19:36		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	ND	100	<0.00013	
Lead	ND	25	<0.000032	
Manganese	ND	100	<0.00013	

Lab ID: 21020200-05A **Collection Date:** 2/3/2021 7:30:00 AM
Client Sample ID: Q0374026-MSE01 **Matrix:** AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1622160**	Analyst: **SRL**
Date Analyzed: 2/12/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**32**	**1.0**	**0.019**	

Lab ID: 21020200-06A **Collection Date:** 2/3/2021 7:30:00 AM
Client Sample ID: 9764113-MSE01 **Matrix:** AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1639150**	Analyst: **SRL**
Date Analyzed: 2/12/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**20**	**1.0**	**0.012**	
METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1639150**	Analyst: **AZ**
Date Analyzed: 2/14/2021 19:39		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**420**	**100**	**0.00026**	
Lead	ND	25	<0.000015	
Manganese	ND	100	<0.000061	

Note:

Client: Gilbane Company **Work Order:** 21020200
Project: HPNS Parcel E-2; J310000400

Analytical Results

Lab ID: 21020200-07A **Collection Date:** 2/3/2021 7:50:00 AM
Client Sample ID: Q0374027-MSE02 **Matrix:** AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1738490**	Analyst: **SRL**
Date Analyzed: 2/12/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**26**	**1.0**	**0.015**	

Lab ID: 21020200-08A **Collection Date:** 2/3/2021 7:50:00 AM
Client Sample ID: 9764114-MSE02 **Matrix:** AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1597500**	Analyst: **SRL**
Date Analyzed: 2/12/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**22**	**1.0**	**0.014**	
METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1597500**	Analyst: **AZ**
Date Analyzed: 2/14/2021 19:43		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**110**	**100**	**0.000072**	
Lead	ND	25	<0.000016	
Manganese	ND	100	<0.000063	

Note:

ALS Environmental

Date: 16-Feb-21

Client: Gilbane Company

Work Order: 21020200

Project: HPNS Parcel E-2; J310000400

QC BATCH REPORT

Batch ID: **R187760** Instrument ID **BAL2** Method: **TSP**

DUP Sample ID: **21020200-02A DUP** Units: **mg/sample** Analysis Date: **2/12/2021**

Client ID: **9764111-MSE01** Run ID: **BAL2_210212A** SeqNo: **2397950** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total suspended particulate	19.37	1.0	0	0	0		19.67	1.54	20	

The following samples were analyzed in this batch:

21020200-02A 21020200-04A 21020200-06A
21020200-08A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21020200
Project: HPNS Parcel E-2; J310000400

QC BATCH REPORT

Batch ID: **R187765** Instrument ID **BAL2** Method: **PM10**

DUP Sample ID: **21020200-01A DUP** Units: **mg/sample** Analysis Date: **2/12/2021**
Client ID: **Q0374024-MSE01** Run ID: **BAL2_210212B** SeqNo: **2398020** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Particulate as PM10	27.15	1.0	0	0	0		28.48	4.78	20	

The following samples were analyzed in this batch:

21020200-01A 21020200-03A 21020200-05A
21020200-07A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21020200
Project: HPNS Parcel E-2; J310000400

QC BATCH REPORT

Batch ID: **72667** Instrument ID **ICP3** Method: **E12**

MBLK Sample ID: **MBLK-72667-72667** Units: **µg/sample** Analysis Date: **2/14/2021 07:05 PM**
Client ID: Run ID: **ICP3_210212B** SeqNo: **2398556** Prep Date: **2/14/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	ND	100								
Lead	ND	25								
Manganese	ND	100								

LCS Sample ID: **LCS-72667-72667** Units: **µg/sample** Analysis Date: **2/14/2021 07:09 PM**
Client ID: Run ID: **ICP3_210212B** SeqNo: **2398557** Prep Date: **2/14/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	392.5	100	450	0	87.2	75-125	0			
Lead	418.1	25	450	0	92.9	75-125	0			
Manganese	387.5	100	450	0	86.1	75-125	0			

LCSD Sample ID: **LCSD-72667-72667** Units: **µg/sample** Analysis Date: **2/14/2021 07:13 PM**
Client ID: Run ID: **ICP3_210212B** SeqNo: **2398558** Prep Date: **2/14/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	406.7	100	450	0	90.4	75-125	392.5	3.54	20	
Lead	428.2	25	450	0	95.2	75-125	418.1	2.39	20	
Manganese	404.7	100	450	0	89.9	75-125	387.5	4.34	20	

MS Sample ID: **21020200-02A MS** Units: **µg/sample** Analysis Date: **2/14/2021 07:28 PM**
Client ID: **9764111-MSE01** Run ID: **ICP3_210212B** SeqNo: **2398560** Prep Date: **2/14/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	601.6	100	450	231.1	82.3	75-125	0			
Lead	421.6	25	450	1.847	93.3	75-125	0			
Manganese	376.1	100	450	5.751	82.3	75-125	0			

MSD Sample ID: **21020200-02A MSD** Units: **µg/sample** Analysis Date: **2/14/2021 07:32 PM**
Client ID: **9764111-MSE01** Run ID: **ICP3_210212B** SeqNo: **2398561** Prep Date: **2/14/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	594.4	100	450	231.1	80.7	75-125	601.6	1.2	20	
Lead	419.3	25	450	1.847	92.8	75-125	421.6	0.546	20	
Manganese	377.4	100	450	5.751	82.6	75-125	376.1	0.346	20	

The following samples were analyzed in this batch: 21020200-02A 21020200-04A 21020200-06A 21020200-08A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 16-Feb-21

Client: Gilbane Company
Project: HPNS Parcel E-2; J310000400
WorkOrder: **21020200**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
µg/sample	
mg/sample	

ALS Environmental

Sample Receipt Checklist

Client Name: **GILBANE-WALNUTCREEK** Date/Time Received: **05-Feb-21 09:50**

Work Order: **21020200** Received by: **DNS**

Checklist completed by [redacted] 08-Feb-21 Reviewed by: [redacted] 09-Feb-21

eSignature Date eSignature Date

Matrices:

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):			
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

CHAIN-OF-CUSTODY RECORD

Gilbane Federal [redacted]

COC # KT-020321

21020200

Gilbane

Project Name: Hunters Point Shipyard, Parcel E RA Phase 2	Laboratory: ALS Laboratory Group, Cincinnati, OH	Event: Parcel E Phase 2 Air Monitoring
Project Number: J310000400	POC: [redacted]	
WBS Code: J310000400	Ship to: [redacted]	

Comments:

Equipment:

Code	Matrix
A	Air

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

						Analytical Test Method	CAAIR - Air PM10	E12 - Air Pb Mn Cu	N0500 - Air TSP											
	Event: Parcel E Phase 2 Air Monitoring						1	1	1											
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	Q0374024-MSE01	A	02/02/2021	0730	KT		X									AMSE1	N1	0.00	0.00	1	VOLUME: 1540.31
2	9764111-MSE01	A	02/02/2021	0730	KT			X	X							AMSE1	N1	0.00	0.00	1	VOLUME: 1561.21
3	Q0374025-MSE02	A	02/02/2021	0805	KT		X									AMSE2	N1	0.00	0.00	1	VOLUME: 797.68
4	9764112-MSE02	A	02/02/2021	0805	KT			X	X							AMSE2	N1	0.00	0.00	1	VOLUME: 775.63
5	Q0374026-MSE01	A	02/03/2021	0730	KT		X									AMSE1	N1	0.00	0.00	1	VOLUME: 1622.16
6	9764113-MSE01	A	02/03/2021	0730	KT			X	X							AMSE1	N1	0.00	0.00	1	VOLUME: 1639.15
7	Q0374027-MSE02	A	02/03/2021	0750	KT		X									AMSE2	N1	0.00	0.00	1	VOLUME: 1738.49
8	9764114-MSE02	A	02/03/2021	0750	KT			X	X							AMSE2	N1	0.00	0.00	1	VOLUME: 1597.50

Turnaround Time: 5 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	2/4/21	1600	FedEx	2/4/21	1600
			[redacted]	2/5/21	0950

Shipping Date / Carrier / Airbill Number

Shipping Date: 2/4/2021 / FedEx 7728 2410 7244

Received by Laboratory: *(Signature, Date, Time)* **& condition**

17-Feb-2021

[redacted]
Gilbane Company
[redacted]
[redacted]

Re: **HPNS Parcel E-2; J310000400** Work Order: **21020345**

Dear[redacted]

ALS Environmental received 4 samples on 10-Feb-2021 09:59 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 11.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

[redacted]
Electronically approved by: Rob Nieman

[redacted]
Project Manager

Report of Laboratory Analysis

ALS Environmental

Date: 17-Feb-21

Client: Gilbane Company
Project: HPNS Parcel E-2; J310000400
Work Order: **21020345**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
21020345-01	Q0424220-MSE01	Air		2/9/2021 07:46	2/10/2021	☐
21020345-02	9894218-MSE01	Air		2/9/2021 07:46	2/10/2021	☐
21020345-03	Q0424221-MSE02	Air		2/9/2021 08:08	2/10/2021	☐
21020345-04	9894219-MSE02	Air		2/9/2021 08:08	2/10/2021	☐

Client:	Gilbane Company
Project:	HPNS Parcel E-2; J310000400
Work Order:	21020345

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

All sampling information was provided by the client.

ALS Environmental

Date: *17-Feb-21*

Client: Gilbane Company
Project: HPNS Parcel E-2; J310000400

Work Order: 21020345

Analytical Results

Lab ID: 21020345-01A
Collection Date: 2/9/2021 7:46:00 AM
Client Sample ID: Q0424220-MSE01
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1587620**	Analyst: **SRL**
Date Analyzed: 2/12/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**34**	**1.0**	**0.021**	

Lab ID: 21020345-02A
Collection Date: 2/9/2021 7:46:00 AM
Client Sample ID: 9894218-MSE01
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1627080**	Analyst: **SRL**
Date Analyzed: 2/12/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**47**	**1.0**	**0.029**	
METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1627080**	Analyst: **AZ**
Date Analyzed: 2/14/2021 19:47		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**370**	**100**	**0.00023**	
Lead	ND	25	<0.000015	
Manganese	ND	100	<0.000061	

Lab ID: 21020345-03A
Collection Date: 2/9/2021 8:08:00 AM
Client Sample ID: Q0424221-MSE02
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1615570**	Analyst: **SRL**
Date Analyzed: 2/12/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**33**	**1.0**	**0.021**	

Note:

ALS Environmental

Date: *17-Feb-21*

Client: Gilbane Company
Project: HPNS Parcel E-2; J310000400

Work Order: 21020345

Analytical Results

Lab ID: 21020345-04A
Client Sample ID: 9894219-MSE02

Collection Date: 2/9/2021 8:08:00 AM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1534610**	Analyst: **SRL**
Date Analyzed: 2/12/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**43**	**1.0**	**0.028**	
METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1534610**	Analyst: **AZ**
Date Analyzed: 2/14/2021 19:51		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**180**	**100**	**0.00012**	
Lead	ND	25	<0.000016	
Manganese	ND	100	<0.000065	

Note:

ALS Environmental

Date: 17-Feb-21

Client: Gilbane Company

Work Order: 21020345

Project: HPNS Parcel E-2; J310000400

QC BATCH REPORT

Batch ID: **R187760** Instrument ID **BAL2** Method: **TSP**

DUP Sample ID: **21020200-02A DUP** Units: **mg/sample** Analysis Date: **2/12/2021**

Client ID: Run ID: **BAL2_210212A** SeqNo: **2397950** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total suspended particulate	19.37	1.0	0	0	0		19.67	1.54	20	

The following samples were analyzed in this batch: 21020345-02A 21020345-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21020345
Project: HPNS Parcel E-2; J310000400

QC BATCH REPORT

Batch ID: **R187765** Instrument ID **BAL2** Method: **PM10**

DUP Sample ID: **21020200-01A DUP** Units: **mg/sample** Analysis Date: **2/12/2021**
Client ID: Run ID: **BAL2_210212B** SeqNo: **2398020** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Particulate as PM10	27.15	1.0	0	0	0		28.48	4.78	20	

The following samples were analyzed in this batch: 21020345-01A 21020345-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21020345
Project: HPNS Parcel E-2; J310000400

QC BATCH REPORT

Batch ID: **72667** Instrument ID **ICP3** Method: **E12**

MBLK Sample ID: **MBLK-72667-72667** Units: **µg/sample** Analysis Date: **2/14/2021 07:05 PM**
Client ID: Run ID: **ICP3_210212B** SeqNo: **2398556** Prep Date: **2/14/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	ND	100								
Lead	ND	25								
Manganese	ND	100								

LCS Sample ID: **LCS-72667-72667** Units: **µg/sample** Analysis Date: **2/14/2021 07:09 PM**
Client ID: Run ID: **ICP3_210212B** SeqNo: **2398557** Prep Date: **2/14/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	392.5	100	450	0	87.2	75-125	0			
Lead	418.1	25	450	0	92.9	75-125	0			
Manganese	387.5	100	450	0	86.1	75-125	0			

LCSD Sample ID: **LCSD-72667-72667** Units: **µg/sample** Analysis Date: **2/14/2021 07:13 PM**
Client ID: Run ID: **ICP3_210212B** SeqNo: **2398558** Prep Date: **2/14/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	406.7	100	450	0	90.4	75-125	392.5	3.54	20	
Lead	428.2	25	450	0	95.2	75-125	418.1	2.39	20	
Manganese	404.7	100	450	0	89.9	75-125	387.5	4.34	20	

MS Sample ID: **21020200-02A MS** Units: **µg/sample** Analysis Date: **2/14/2021 07:28 PM**
Client ID: Run ID: **ICP3_210212B** SeqNo: **2398560** Prep Date: **2/14/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	601.6	100	450	231.1	82.3	75-125	0			
Lead	421.6	25	450	1.847	93.3	75-125	0			
Manganese	376.1	100	450	5.751	82.3	75-125	0			

MSD Sample ID: **21020200-02A MSD** Units: **µg/sample** Analysis Date: **2/14/2021 07:32 PM**
Client ID: Run ID: **ICP3_210212B** SeqNo: **2398561** Prep Date: **2/14/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	594.4	100	450	231.1	80.7	75-125	601.6	1.2	20	
Lead	419.3	25	450	1.847	92.8	75-125	421.6	0.546	20	
Manganese	377.4	100	450	5.751	82.6	75-125	376.1	0.346	20	

The following samples were analyzed in this batch: 21020345-02A 21020345-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 17-Feb-21

Client: Gilbane Company
Project: HPNS Parcel E-2; J310000400
WorkOrder: **21020345**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
µg/sample	
mg/sample	

ALS Environmental

Sample Receipt Checklist

Client Name: **GILBANE-WALNUTCREEK** Date/Time Received: **10-Feb-21 09:59**

Work Order: **21020345** Received by: **SNH**

Checklist completed by [redacted] 10-Feb-21 Reviewed by: [redacted] 12-Feb-21

eSignature Date eSignature Date

Matrices:

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):			
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

CHAIN-OF-CUSTODY RECORD

Gilbane Federal [redacted] 345

COC # KT-020921 AIR

Gilbane

Project Name: Hunters Point Shipyard, Parcel E RA Phase 2	Laboratory: ALS Laboratory Group, Cincinnati, OH	Event: Parcel E Phase 2 Air Monitoring
Project Number: J310000400	POC [redacted]	
WBS Code: J310000400	Ship to: [redacted]	

Comments:

Equipment:

Analytical Test Method: CAAIR - Air PM10; E12 - Air Pb Mn Cu; N0500 - Air TSP

Code	Matrix
A	Air

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

Event: Parcel E Phase 2 Air Monitoring — CAAIR - Air PM10: 1; E12 - Air Pb Mn Cu: 1; N0500 - Air TSP: 1

	Sample ID	Matrix	Date	Time	Samp Init.	CAAIR - Air PM10	E12 - Air Pb Mn Cu	N0500 - Air TSP	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	Q0424220-MSE01	A	02/09/2021	0746	KT	X			AMSE1	N1	0.00	0.00	1	VOLUME: 1587.62
2	9894218-MSE01	A	02/09/2021	0746	KT		X	X	AMSE1	N1	0.00	0.00	1	VOLUME: 1627.08
3	Q0424221-MSE02	A	02/09/2021	0808	KT	X			AMSE2	N1	0.00	0.00	1	VOLUME: 1615.57
4	9894219-MSE02	A	02/09/2021	0808	KT		X	X	AMSE2	N1	0.00	0.00	1	VOLUME: 1534.61

Turnaround Time: 5 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	2/9/21	1600	[redacted]	2/9/21	1600

Shipping Date / Carrier / Airbill Number

Shipping Date: 2/9/2021 / FedEx

7728 6671, 6642

[redacted]ate, Time) & condition

~~2/9/21~~ 2/10/21

0959

fedex

22-Feb-2021

[redacted]
Gilbane Company
[redacted]
[redacted]

Re: **HPNS Parcel E; J310000400** Work Order: **21020510**

Dear [redacted]

ALS Environmental received 8 samples on 15-Feb-2021 12:15 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 12.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

[redacted]
Electronically approved by: Rob Nieman

[redacted]
Project Manager

Report of Laboratory Analysis

ALS Environmental

Date: 22-Feb-21

Client: Gilbane Company
Project: HPNS Parcel E; J310000400
Work Order: **21020510**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
21020510-01	Q0424223-MSE02	Air		2/10/2021 07:57	2/15/2021 12:15	☐
21020510-02	9894220-MSE01	Air		2/10/2021 07:40	2/15/2021 12:15	☐
21020510-03	Q0424222-MSE01	Air		2/10/2021 07:40	2/15/2021 12:15	☐
21020510-04	9894221-MSE02	Air		2/10/2021 07:57	2/15/2021 12:15	☐
21020510-05	Q0424224-MSE01	Air		2/11/2021 08:10	2/15/2021 12:15	☐
21020510-06	9894222-MSE01	Air		2/11/2021 08:10	2/15/2021 12:15	☐
21020510-07	Q0424225-MSE02	Air		2/11/2021 07:59	2/15/2021 12:15	☐
21020510-08	9894223-MSE02	Air		2/11/2021 07:59	2/15/2021 12:15	☐

Client:	Gilbane Company
Project:	HPNS Parcel E; J310000400
Work Order:	21020510

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

All sampling information was provided by the client.

ALS Environmental

Date: *22-Feb-21*

Client: Gilbane Company
Project: HPNS Parcel E; J310000400

Work Order: 21020510

Analytical Results

Lab ID: 21020510-01A
Collection Date: 2/10/2021 7:57:00 AM
Client Sample ID: Q0424223-MSE02
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1625950**	Analyst: **SRL**
Date Analyzed: 2/22/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**26**	**1.0**	**0.016**	

Lab ID: 21020510-02A
Collection Date: 2/10/2021 7:40:00 AM
Client Sample ID: 9894220-MSE01
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1660370**	Analyst: **SRL**
Date Analyzed: 2/18/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**22**	**1.0**	**0.013**	
METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1660370**	Analyst: **AZ**
Date Analyzed: 2/19/2021 11:15		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**490**	**25**	**0.00030**	
Lead	ND	25	<0.000015	
Manganese	ND	25	<0.000015	

Lab ID: 21020510-03A
Collection Date: 2/10/2021 7:40:00 AM
Client Sample ID: Q0424222-MSE01
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1626890**	Analyst: **SRL**
Date Analyzed: 2/22/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**22**	**1.0**	**0.013**	

Note:

Client: Gilbane Company **Work Order:** 21020510
Project: HPNS Parcel E; J310000400

Analytical Results

Lab ID: 21020510-04A **Collection Date:** 2/10/2021 7:57:00 AM
Client Sample ID: 9894221-MSE02 **Matrix:** AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1588130**	Analyst: **SRL**
Date Analyzed: 2/18/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**29**	**1.0**	**0.018**	
METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1588130**	Analyst: **AZ**
Date Analyzed: 2/19/2021 11:35		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**240**	**25**	**0.00015**	
Lead	ND	25	<0.000016	
Manganese	ND	25	<0.000016	

Lab ID: 21020510-05A **Collection Date:** 2/11/2021 8:10:00 AM
Client Sample ID: Q0424224-MSE01 **Matrix:** AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1662290**	Analyst: **SRL**
Date Analyzed: 2/22/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**20**	**1.0**	**0.012**	

Lab ID: 21020510-06A **Collection Date:** 2/11/2021 8:10:00 AM
Client Sample ID: 9894222-MSE01 **Matrix:** AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1695470**	Analyst: **SRL**
Date Analyzed: 2/18/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**25**	**1.0**	**0.015**	
METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1695470**	Analyst: **AZ**
Date Analyzed: 2/19/2021 11:39		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**830**	**25**	**0.00049**	
Lead	ND	25	<0.000015	
Manganese	ND	25	<0.000015	

Note:

ALS Environmental

Date: *22-Feb-21*

Client: Gilbane Company
Project: HPNS Parcel E; J310000400

Work Order: 21020510

Analytical Results

Lab ID: 21020510-07A
Client Sample ID: Q0424225-MSE02

Collection Date: 2/11/2021 7:59:00 AM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1643440**	Analyst: **SRL**
Date Analyzed: 2/22/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**15**	**1.0**	**0.0093**	

Lab ID: 21020510-08A
Client Sample ID: 9894223-MSE02

Collection Date: 2/11/2021 7:59:00 AM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1627520**	Analyst: **SRL**
Date Analyzed: 2/18/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**32**	**1.0**	**0.020**	
METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1627520**	Analyst: **AZ**
Date Analyzed: 2/19/2021 11:43		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**230**	**25**	**0.00014**	
Lead	ND	25	<0.000015	
Manganese	ND	25	<0.000015	

Note:

ALS Environmental

Date: 22-Feb-21

Client: Gilbane Company

Work Order: 21020510

Project: HPNS Parcel E; J310000400

QC BATCH REPORT

Batch ID: **R187946** Instrument ID **BAL2** Method: **TSP**

DUP Sample ID: **21020510-02a DUP** Units: **mg/sample** Analysis Date: **2/18/2021**

Client ID: **9894220-MSE01** Run ID: **BAL2_210218A** SeqNo: **2401405** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total suspended particulate	20.88	1.0	0	0	0		21.52	3.02	20	

The following samples were analyzed in this batch:

21020510-02a 21020510-04a 21020510-06a
21020510-08a

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21020510
Project: HPNS Parcel E; J310000400

QC BATCH REPORT

Batch ID: **R187947** Instrument ID **BAL2** Method: **PM10**

DUP Sample ID: **21020510-01A DUP** Units: **mg/sample** Analysis Date: **2/22/2021**
Client ID: **Q0424223-MSE02** Run ID: **BAL2_210222A** SeqNo: **2401410** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Particulate as PM10	26.95	1.0	0	0	0		26.37	2.18	20	

The following samples were analyzed in this batch:

21020510-01A 21020510-03A 21020510-05A
21020510-07A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21020510
Project: HPNS Parcel E; J310000400

QC BATCH REPORT

Batch ID: **72750** Instrument ID **ICP1** Method: **E12**

MBLK Sample ID: **MBLK-72750-72750** Units: **µg/sample** Analysis Date: **2/19/2021 10:59 AM**
Client ID: Run ID: **ICP1_210219A** SeqNo: **2400899** Prep Date: **2/19/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	ND	100								
Lead	ND	25								
Manganese	ND	100								

LCS Sample ID: **LCS-72750-72750** Units: **µg/sample** Analysis Date: **2/19/2021 11:03 AM**
Client ID: Run ID: **ICP1_210219A** SeqNo: **2400900** Prep Date: **2/19/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	363	100	450	0	80.7	75-125	0			
Lead	375.8	25	450	0	83.5	75-125	0			
Manganese	373.6	100	450	0	83	75-125	0			

LCSD Sample ID: **LCSD-72750-72750** Units: **µg/sample** Analysis Date: **2/19/2021 11:07 AM**
Client ID: Run ID: **ICP1_210219A** SeqNo: **2400901** Prep Date: **2/19/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	409.2	100	450	0	90.9	75-125	363	12	20	
Lead	412.3	25	450	0	91.6	75-125	375.8	9.28	20	
Manganese	412.8	100	450	0	91.7	75-125	373.6	9.97	20	

MS Sample ID: **21020510-02A MS** Units: **µg/sample** Analysis Date: **2/19/2021 11:27 AM**
Client ID: **9894220-MSE01** Run ID: **ICP1_210219A** SeqNo: **2400903** Prep Date: **2/19/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	878.4	100	450	491	86.1	75-125	0			
Lead	406.1	25	450	3.004	89.6	75-125	0			
Manganese	393.8	100	450	8.572	85.6	75-125	0			

MSD Sample ID: **21020510-02A MSD** Units: **µg/sample** Analysis Date: **2/19/2021 11:31 AM**
Client ID: **9894220-MSE01** Run ID: **ICP1_210219A** SeqNo: **2400904** Prep Date: **2/19/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	906.8	100	450	491	92.4	75-125	878.4	3.18	20	
Lead	411.6	25	450	3.004	90.8	75-125	406.1	1.34	20	
Manganese	393.6	100	450	8.572	85.6	75-125	393.8	0.0571	20	

The following samples were analyzed in this batch: 21020510-02A 21020510-04A 21020510-06A 21020510-08A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 22-Feb-21

Client: Gilbane Company
Project: HPNS Parcel E; J310000400
WorkOrder: **21020510**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
µg/sample	
mg/sample	

ALS Environmental

Sample Receipt Checklist

Client Name: **GILBANE-WALNUTCREEK** Date/Time Received: **15-Feb-21 12:15**

Work Order: **21020510** Received by: **RDN**

Checklist completed by [redacted] 16-Feb-21 Reviewed by: [redacted] 19-Feb-21

eSignature Date eSignature Date

Matrices:

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☐
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):			
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

CHAIN-OF-CUSTODY RECORD

Gilbane Federal [redacted] 21020510

COC # KT-021121

Gilbane

Project Name: Hunters Point Shipyard, Parcel E RA Phase 2	Laboratory: ALS Laboratory Group, Cincinnati, OH	Event: Parcel E Phase 2 Air Monitoring
Project Number: J310000400	POC: [redacted]	
WBS Code: J310000400	[redacted]	

Comments:

Equipment:

Code	Matrix
A	Air

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

Event: Parcel E Phase 2 Air Monitoring

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: CAAIR - Air PM10	E12 - Air Pb Mn Cu	N0500 - Air TSP	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						1	1	1						
1	Q0424223-MSE~~02~~ 01	A	02/10/2021	~~0740~~	KT	X			AMSE~~1~~2	N1	0.00	0.00	1	VOLUME: 1625.95
2	9894220-MSE01 02	A	02/10/2021	0740	KT		X	X	AMSE1	N1	0.00	0.00	1	VOLUME: 1660.37
3	Q0424222-MSE~~02~~ 01 03	A	02/10/2021	~~0757~~	KT	X			AMSE~~2~~1	N1	0.00	0.00	1	VOLUME: 1626.89
4	9894221-MSE02 04	A	02/10/2021	0757	KT		X	X	AMSE2	N1	0.00	0.00	1	VOLUME: 1588.13
5	Q0424224-MSE01 05	A	02/11/2021	0810	KT	X			AMSE1	N1	0.00	0.00	1	VOLUME: 1662.29
6	9894222-MSE01 06	A	02/11/2021	0810	KT		X	X	AMSE1	N1	0.00	0.00	1	VOLUME: 1695.47
7	Q0424225-MSE02 07	A	02/11/2021	0759	KT	X			AMSE2	N1	0.00	0.00	1	VOLUME: 1643.44
8	9894223-MSE02 08	A	02/11/2021	0759	KT		X	X	AMSE2	N1	0.00	0.00	1	VOLUME: 1627.52

Turnaround Time: 5 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	2/11/21	1400	[redacted]	2/11/21	1400
			[redacted]	2/11/21	1215

Shipping Date / Carrier / Airbill Number

Shipping Date: 2/11/2021 / FedEx 7728 7851 0826

Received by Laboratory: *(Signature, Date, Time)* **& condition**

26-Feb-2021

[redacted]
Gilbane Company
[redacted]
[redacted]

Re: **HPNS Parcel E; J310000400** Work Order: **21020647**

Dear[redacted]

ALS Environmental received 4 samples on 19-Feb-2021 11:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 11.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

[redacted]
Electronically approved by: Rob Nieman

[redacted]
Project Manager

Report of Laboratory Analysis

ALS Environmental

Date: 26-Feb-21

Client: Gilbane Company
Project: HPNS Parcel E; J310000400
Work Order: **21020647**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
21020647-01	Q0424226-MSE01	Air		2/11/2021 14:00	2/19/2021	☐
21020647-02	9894224-MSE01	Air		2/11/2021 14:00	2/19/2021	☐
21020647-03	Q0424227-MSE02	Air		2/11/2021 14:11	2/19/2021	☐
21020647-04	9894225-MSE02	Air		2/11/2021 14:11	2/19/2021	☐

ALS Environmental

Date: 26-Feb-21

Client: Gilbane Company
Project: HPNS Parcel E; J310000400
Work Order: 21020647

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

All sampling information was provided by the client.

ALS Environmental

Date: *26-Feb-21*

Client: Gilbane Company
Project: HPNS Parcel E; J310000400

Work Order: 21020647

Analytical Results

Lab ID: 21020647-01A
Client Sample ID: Q0424226-MSE01

Collection Date: 2/11/2021 2:00:00 PM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **396530**	Analyst: **SRL**
Date Analyzed: 2/26/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**1.1**	**1.0**	**0.0028**	

Lab ID: 21020647-02A
Client Sample ID: 9894224-MSE01

Collection Date: 2/11/2021 2:00:00 PM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **401950**	Analyst: **SRL**
Date Analyzed: 2/26/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**13**	**1.0**	**0.033**	
METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **401950**	Analyst: **AZ**
Date Analyzed: 2/26/2021 14:51		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**160**	**100**	**0.00039**	
Lead	ND	25	<0.000062	
Manganese	ND	100	<0.00025	

Lab ID: 21020647-03A
Client Sample ID: Q0424227-MSE02

Collection Date: 2/11/2021 2:11:00 PM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **421150**	Analyst: **SRL**
Date Analyzed: 2/26/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**5.8**	**1.0**	**0.014**	

Note:

ALS Environmental

Date: *26-Feb-21*

Client: Gilbane Company
Project: HPNS Parcel E; J310000400

Work Order: 21020647

Analytical Results

Lab ID: 21020647-04A
Client Sample ID: 9894225-MSE02

Collection Date: 2/11/2021 2:11:00 PM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **421330**	Analyst: **SRL**
Date Analyzed: 2/26/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**13**	**1.0**	**0.030**	
METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **421330**	Analyst: **AZ**
Date Analyzed: 2/26/2021 15:03		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	ND	100	<0.00024	
Lead	ND	25	<0.000059	
Manganese	ND	100	<0.00024	

Note:

ALS Environmental

Date: 26-Feb-21

Client: Gilbane Company

QC BATCH REPORT

Work Order: 21020647

Project: HPNS Parcel E; J310000400

Batch ID: **R188110** Instrument ID **BAL2** Method: **TSP**

DUP Sample ID: **21020836-04A DUP** Units: **mg/sample** Analysis Date: **2/26/2021**

Client ID: Run ID: **BAL2_210226A** SeqNo: **2403812** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total suspended particulate	47.89	1.0	0	0	0		45.42	5.29	20	

The following samples were analyzed in this batch: 21020647-02A 21020647-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21020647
Project: HPNS Parcel E; J310000400

QC BATCH REPORT

Batch ID: **R188112** Instrument ID **BAL2** Method: **PM10**

DUP Sample ID: **21020836-03A DUP** Units: **mg/sample** Analysis Date: **2/26/2021**
Client ID: Run ID: **BAL2_210226B** SeqNo: **2403825** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Particulate as PM10	34.08	1.0	0	0	0		34.15	0.205	20	

The following samples were analyzed in this batch: 21020647-01A 21020647-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21020647
Project: HPNS Parcel E; J310000400

QC BATCH REPORT

Batch ID: **72893** Instrument ID **ICP1** Method: **E12**

MBLK Sample ID: **MBLK-72893-72893** Units: **µg/sample** Analysis Date: **2/26/2021 02:39 PM**
Client ID: Run ID: **ICP1_210226A** SeqNo: **2404530** Prep Date: **2/26/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	ND	100								
Lead	ND	25								
Manganese	30.23	100								J

LCS Sample ID: **LCS-72893-72893** Units: **µg/sample** Analysis Date: **2/26/2021 02:43 PM**
Client ID: Run ID: **ICP1_210226A** SeqNo: **2404531** Prep Date: **2/26/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	362.8	100	450	0	80.6	75-125	0			
Lead	388.9	25	450	0	86.4	75-125	0			
Manganese	402.2	100	450	0	89.4	75-125	0			

LCSD Sample ID: **LCSD-72893-72893** Units: **µg/sample** Analysis Date: **2/26/2021 02:47 PM**
Client ID: Run ID: **ICP1_210226A** SeqNo: **2404532** Prep Date: **2/26/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	363.7	100	450	0	80.8	75-125	362.8	0.248	20	
Lead	394.4	25	450	0	87.6	75-125	388.9	1.4	20	
Manganese	393.8	100	450	0	87.5	75-125	402.2	2.09	20	

MS Sample ID: **21020647-02A MS** Units: **µg/sample** Analysis Date: **2/26/2021 02:55 PM**
Client ID: **9894224-MSE01** Run ID: **ICP1_210226A** SeqNo: **2404534** Prep Date: **2/26/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	490.5	100	450	156.5	74.2	75-125	0			S
Lead	372.2	25	450	0.09855	82.7	75-125	0			
Manganese	355.7	100	450	12.98	76.2	75-125	0			

MSD Sample ID: **21020647-02A MSD** Units: **µg/sample** Analysis Date: **2/26/2021 02:59 PM**
Client ID: **9894224-MSE01** Run ID: **ICP1_210226A** SeqNo: **2404535** Prep Date: **2/26/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	496.8	100	450	156.5	75.6	75-125	490.5	1.28	20	
Lead	378.4	25	450	0.09855	84.1	75-125	372.2	1.64	20	
Manganese	363.5	100	450	12.98	77.9	75-125	355.7	2.18	20	

The following samples were analyzed in this batch: 21020647-02A 21020647-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 26-Feb-21

Client: Gilbane Company
Project: HPNS Parcel E; J310000400
WorkOrder: **21020647**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
µg/sample	
mg/sample	

ALS Environmental

Sample Receipt Checklist

Client Name: **GILBANE-WALNUTCREEK** Date/Time Received: **19-Feb-21 11:15**

Work Order: **21020647** Received by: **RDN**

Checklist completed by [redacted] 19-Feb-21 Reviewed by: [redacted] 23-Feb-21

eSignature Date eSignature Date

Matrices:

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):			
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

CHAIN-OF-CUSTODY RECORD

Gilbane Federal [redacted] 2102647

COC # KT-021621-AIR

Gilbane

Project Name: Hunters Point Shipyard, Parcel E RA Phase 2	Laboratory: ALS Laboratory Group, Cincinnati, OH	Event: Parcel E Phase 2 Air Monitoring
Project Number: J310000400	POC: [redacted]	
WBS Code: J310000400	Ship to: [redacted]	

Comments:

Equipment:

Code	Matrix
A	Air

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

Event: Parcel E Phase 2 Air Monitoring

	Sample ID	Matrix	Date	Time	Samp Init.	CAAIR - Air PM10	E12 - Air Pb Mn Cu	N0500 - Air TSP	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
	Analytical Test Method					1	1	1						
1	Q0424226-MSE01 01	A	02/11/2021	1400	KT	X			AMSE1	N2	0.00	0.00	1	VOLUME: 396.53
2	9894224-MSE01 02	A	02/11/2021	1400	KT		X	X	AMSE1	N2	0.00	0.00	1	VOLUME: 401.95
3	Q0424227-MSE02 03	A	02/11/2021	1411	KT	X			AMSE2	N2	0.00	0.00	1	VOLUME: 421.15
4	9894225-MSE02 04	A	02/11/2021	1411	KT		X	X	AMSE2	N2	0.00	0.00	1	VOLUME: 421.33

Turnaround Time: 5 days

Relinquished by: *(Signature)*	**Date**	**Time**	**Received by:** *(Signature)*	**Date**	**Time**
[redacted]	2/16/21	1400	FedEx	2/16/21	1400
			[redacted]	2/19/21	11:15
			✓ Custody Seal		

Shipping Date / Carrier / Airbill Number

Shipping Date: 2/16/2021 / FedEx 7729 2003 6223

Received by Laboratory: *(Signature, Date, Time)* **& condition**

15-Mar-2021

[redacted]
Gilbane Company
[redacted]
[redacted]

Re: **HPNS Parcel E; J310000400** Work Order: **21020836**

Dear [redacted]

ALS Environmental received 8 samples on 23-Feb-2021 04:15 PM for the analyses presented in the following report.

This is a REVISED REPORT. The Case Narrative provides information discussing the reason for issuing a revised report. The total number of pages in this revision is 15.

If you have any questions regarding these test results, please feel free to contact me.

Sincerely,

[redacted]
Electronically approved by: Rob Nieman

[redacted]
Project Manager

Report of Laboratory Analysis

ALS Environmental

Date: 15-Mar-21

Client: Gilbane Company
Project: HPNS Parcel E; J310000400
Work Order: **21020836**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
21020836-01	Q0424228-MSE01	Air		2/17/2021 07:55	2/23/2021 16:15	☐
21020836-02	9894227-MSE01	Air		2/17/2021 07:55	2/23/2021 16:15	☐
21020836-03	Q0424229-MSE02	Air		2/17/2021 07:44	2/23/2021 16:15	☐
21020836-04	9894226-MSE02	Air		2/17/2021 07:44	2/23/2021 16:15	☐
21020836-05	Q0424230-MSE01	Air		2/18/2021 07:48	2/23/2021 16:15	☐
21020836-06	9894228-MSE01	Air		2/18/2021 07:48	2/23/2021 16:15	☐
21020836-07	Q0424231-MSE02	Air		2/18/2021 07:38	2/23/2021 16:15	☐
21020836-08	9894229-MSE02	Air		2/18/2021 07:38	2/23/2021 16:15	☐

ALS Environmental

Date: 15-Mar-21

Client:	Gilbane Company
Project:	HPNS Parcel E; J310000400
Work Order:	21020836

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

All sampling information was provided by the client.

This report was revised as follows: Additional samples were added.

ALS Environmental

Date: *15-Mar-21*

Client: Gilbane Company
Project: HPNS Parcel E; J310000400

Work Order: 21020836

Analytical Results

Lab ID: 21020836-01A
Client Sample ID: Q0424228-MSE01

Collection Date: 2/17/2021 7:55:00 AM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1652140**	Analyst: **SRL**
Date Analyzed: 2/26/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**38**	**1.0**	**0.023**	

Lab ID: 21020836-02A
Client Sample ID: 9894227-MSE01

Collection Date: 2/17/2021 7:55:00 AM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1682270**	Analyst: **SRL**
Date Analyzed: 2/26/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**51**	**1.0**	**0.030**	

METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1682270**	Analyst: **AZ**
Date Analyzed: 2/26/2021 15:07		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**530**	**100**	**0.00032**	
Lead	ND	25	<0.000015	
Manganese	ND	100	<0.000059	

Lab ID: 21020836-03A
Client Sample ID: Q0424229-MSE02

Collection Date: 2/17/2021 7:44:00 AM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1627360**	Analyst: **SRL**
Date Analyzed: 2/26/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**34**	**1.0**	**0.021**	

Note:

Client: Gilbane Company **Work Order:** 21020836
Project: HPNS Parcel E; J310000400

Analytical Results

Lab ID: 21020836-04A **Collection Date:** 2/17/2021 7:44:00 AM
Client Sample ID: 9894226-MSE02 **Matrix:** AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1624690**	Analyst: **SRL**
Date Analyzed: 2/26/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**45**	**1.0**	**0.028**	

METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1624690**	Analyst: **AZ**
Date Analyzed: 2/26/2021 15:11		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**220**	**100**	**0.00013**	
Lead	ND	25	<0.000015	
Manganese	ND	100	<0.000062	

Lab ID: 21020836-05A **Collection Date:** 2/18/2021 7:48:00 AM
Client Sample ID: Q0424230-MSE01 **Matrix:** AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1629400**	Analyst: **SRL**
Date Analyzed: 3/10/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**17**	**1.0**	**0.011**	

Lab ID: 21020836-06A **Collection Date:** 2/18/2021 7:48:00 AM
Client Sample ID: 9894228-MSE01 **Matrix:** AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1653010**	Analyst: **SRL**
Date Analyzed: 3/10/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**37**	**1.0**	**0.022**	

METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1653010**	Analyst: **AZ**
Date Analyzed: 3/11/2021 13:40		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**1,200**	**100**	**0.00072**	
Lead	ND	25	<0.000015	
Manganese	ND	100	<0.000060	

Note:

Client: Gilbane Company **Work Order:** 21020836
Project: HPNS Parcel E; J310000400

Analytical Results

Lab ID: 21020836-07A **Collection Date:** 2/18/2021 7:38:00 AM
Client Sample ID: Q0424231-MSE02 **Matrix:** AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1625700**	Analyst: **SRL**
Date Analyzed: 3/10/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**24**	**1.0**	**0.014**	

Lab ID: 21020836-08A **Collection Date:** 2/18/2021 7:38:00 AM
Client Sample ID: 9894229-MSE02 **Matrix:** AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1612800**	Analyst: **SRL**
Date Analyzed: 3/10/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**37**	**1.0**	**0.023**	
METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1612800**	Analyst: **AZ**
Date Analyzed: 3/11/2021 13:44		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**240**	**100**	**0.00015**	
Lead	ND	25	<0.000016	
Manganese	ND	100	<0.000062	

Note:

ALS Environmental

Date: 15-Mar-21

Client: Gilbane Company

Work Order: 21020836

Project: HPNS Parcel E; J310000400

QC BATCH REPORT

Batch ID: **R188110** Instrument ID: **BAL2** Method: **TSP**

DUP Sample ID: **21020836-04A DUP** Units: **mg/sample** Analysis Date: **2/26/2021**

Client ID: **9894226-MSE02** Run ID: **BAL2_210226A** SeqNo: **2403812** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total suspended particulate	47.89	1.0	0	0	0		45.42	5.29	20	

The following samples were analyzed in this batch: 21020836-02A 21020836-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21020836
Project: HPNS Parcel E; J310000400

QC BATCH REPORT

Batch ID: **R188112** Instrument ID: **BAL2** Method: **PM10**

DUP Sample ID: **21020836-03A DUP** Units: **mg/sample** Analysis Date: **2/26/2021**
Client ID: **Q0424229-MSE02** Run ID: **BAL2_210226B** SeqNo: **2403825** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Particulate as PM10	34.08	1.0	0	0	0		34.15	0.205	20	

The following samples were analyzed in this batch: 21020836-01A 21020836-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21020836
Project: HPNS Parcel E; J310000400

QC BATCH REPORT

Batch ID: **R189534** Instrument ID: **BAL2** Method: **TSP**

DUP Sample ID: **21020836-06A DUP** Units: **mg/sample** Analysis Date: **3/10/2021**
Client ID: **9894228-MSE01** Run ID: **BAL2_210310A** SeqNo: **2412414** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total suspended particulate	36.75	1.0	0	0	0		36.88	0.353	20	

The following samples were analyzed in this batch: 21020836-06A 21020836-08A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21020836
Project: HPNS Parcel E; J310000400

QC BATCH REPORT

Batch ID: **R189535** Instrument ID: **BAL2** Method: **PM10**

DUP	Sample ID: **21030347-01A DUP**				Units: **mg/sample**		Analysis Date: **3/10/2021**			
Client ID:		Run ID: **BAL2_210310B**			SeqNo: **2412470**		Prep Date:		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Particulate as PM10	48.26	1.0	0	0	0		47.03	2.58	20	

The following samples were analyzed in this batch: 21020836-05A 21020836-07A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21020836
Project: HPNS Parcel E; J310000400

QC BATCH REPORT

Batch ID: **72893** Instrument ID: **ICP1** Method: **E12**

MBLK Sample ID: **MBLK-72893-72893** Units: **µg/sample** Analysis Date: **2/26/2021 02:39 PM**
Client ID: Run ID: **ICP1_210226A** SeqNo: **2404530** Prep Date: **2/26/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	ND	100								
Lead	ND	25								
Manganese	30.23	100								J

LCS Sample ID: **LCS-72893-72893** Units: **µg/sample** Analysis Date: **2/26/2021 02:43 PM**
Client ID: Run ID: **ICP1_210226A** SeqNo: **2404531** Prep Date: **2/26/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	362.8	100	450	0	80.6	75-125	0			
Lead	388.9	25	450	0	86.4	75-125	0			
Manganese	402.2	100	450	0	89.4	75-125	0			

LCSD Sample ID: **LCSD-72893-72893** Units: **µg/sample** Analysis Date: **2/26/2021 02:47 PM**
Client ID: Run ID: **ICP1_210226A** SeqNo: **2404532** Prep Date: **2/26/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	363.7	100	450	0	80.8	75-125	362.8	0.248	20	
Lead	394.4	25	450	0	87.6	75-125	388.9	1.4	20	
Manganese	393.8	100	450	0	87.5	75-125	402.2	2.09	20	

MS Sample ID: **21020647-02A MS** Units: **µg/sample** Analysis Date: **2/26/2021 02:55 PM**
Client ID: Run ID: **ICP1_210226A** SeqNo: **2404534** Prep Date: **2/26/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	490.5	100	450	156.5	74.2	75-125	0			S
Lead	372.2	25	450	0.09855	82.7	75-125	0			
Manganese	355.7	100	450	12.98	76.2	75-125	0			

MSD Sample ID: **21020647-02A MSD** Units: **µg/sample** Analysis Date: **2/26/2021 02:59 PM**
Client ID: Run ID: **ICP1_210226A** SeqNo: **2404535** Prep Date: **2/26/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	496.8	100	450	156.5	75.6	75-125	490.5	1.28	20	
Lead	378.4	25	450	0.09855	84.1	75-125	372.2	1.64	20	
Manganese	363.5	100	450	12.98	77.9	75-125	355.7	2.18	20	

The following samples were analyzed in this batch: 21020836-02A 21020836-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21020836
Project: HPNS Parcel E; J310000400

QC BATCH REPORT

Batch ID: **73112** Instrument ID: **ICP1** Method: **E12**

MBLK Sample ID: **MBLK-73112-73112** Units: **µg/sample** Analysis Date: **3/11/2021 01:20 PM**
Client ID: Run ID: **ICP1_210311A** SeqNo: **2413805** Prep Date: **3/10/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	ND	100								
Lead	ND	25								
Manganese	ND	100								

LCS Sample ID: **LCS-73112-73112** Units: **µg/sample** Analysis Date: **3/11/2021 01:24 PM**
Client ID: Run ID: **ICP1_210311A** SeqNo: **2413806** Prep Date: **3/10/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	450	100	450	0	100	75-125	0			
Lead	461.2	25	450	0	102	75-125	0			
Manganese	478.8	100	450	0	106	75-125	0			

LCSD Sample ID: **LCSD-73112-73112** Units: **µg/sample** Analysis Date: **3/11/2021 01:36 PM**
Client ID: Run ID: **ICP1_210311A** SeqNo: **2413807** Prep Date: **3/10/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	456.3	100	450	0	101	75-125	450	1.39	20	
Lead	465.8	25	450	0	104	75-125	461.2	0.971	20	
Manganese	474.8	100	450	0	106	75-125	478.8	0.849	20	

MS Sample ID: **21030347-08A MS** Units: **µg/sample** Analysis Date: **3/11/2021 02:12 PM**
Client ID: Run ID: **ICP1_210311A** SeqNo: **2413816** Prep Date: **3/10/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	677.2	100	450	242.3	96.7	75-125	0			
Lead	479.7	25	450	2.945	106	75-125	0			
Manganese	489.6	100	450	15.24	105	75-125	0			

MSD Sample ID: **21030347-08A MSD** Units: **µg/sample** Analysis Date: **3/11/2021 02:24 PM**
Client ID: Run ID: **ICP1_210311A** SeqNo: **2413817** Prep Date: **3/10/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	689	100	450	242.3	99.3	75-125	677.2	1.71	20	
Lead	487.4	25	450	2.945	108	75-125	479.7	1.58	20	
Manganese	489.2	100	450	15.24	105	75-125	489.6	0.092	20	

The following samples were analyzed in this batch: 21020836-06A 21020836-08A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 15-Mar-21

Client: Gilbane Company
Project: HPNS Parcel E; J310000400
WorkOrder: **21020836**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
µg/sample	
mg/sample	

ALS Environmental

Sample Receipt Checklist

Client Name: **GILBANE-WALNUTCREEK** Date/Time Received: **23-Feb-21 16:15**

Work Order: **21020836** Received by: **RDN**

Checklist completed by: [redacted] 24-Feb-21 Reviewed by: [redacted] 25-Feb-21

eSignature Date eSignature Date

Matrices:

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):			
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

CHAIN-OF-CUSTODY RECORD

Gilbane Federal 21020836
[redacted]

COC # KT-021821

Gilbane

Project Name: Hunters Point Shipyard, Parcel E RA Phase 2	Laboratory: ALS Laboratory Group, Cincinnati, OH	Event: Parcel E Phase 2 Air Monitoring
Project Number: J310000400	POC: [redacted]	
WBS Code: J310000400	Ship to: [redacted]	

Comments:

Equipment:

Code	Matrix
A	Air

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

Analytical Test Method

Event: Parcel E Phase 2 Air Monitoring

	Sample ID		Matrix	Date	Time	Samp Init.	CAAIR - Air PM10	E12 - Air Pb Mn Cu	N0500 - Air TSP	Location ID	Sample Type	Depth (ft bgs) Top	Bottom	Cooler	Comments
							1	1	1						
1	Q0424228-MSE01	01	A	02/17/2021	0755	KT	X			AMSE1	N1	0.00	0.00	1	VOLUME: 1652.14
2	9894227-MSE01	02	A	02/17/2021	0755	KT		X	X	AMSE1	N1	0.00	0.00	1	VOLUME: 1682.27
3	Q0424229-MSE02	03	A	02/17/2021	0744	KT	X			AMSE2	N1	0.00	0.00	1	VOLUME: 1627.36
4	9894226-MSE02	04	A	02/17/2021	0744	KT		X	X	AMSE2	N1	0.00	0.00	1	VOLUME: 1624.69
5	Q0424230-MSE01	05	A	02/18/2021	0748	KT	X			AMSE1	N1	0.00	0.00	1	VOLUME: 1629.40
6	9894228-MSE01	06	A	02/18/2021	0748	KT		X	X	AMSE1	N1	0.00	0.00	1	VOLUME: 1653.01
7	Q0424231-MSE02	07	A	02/18/2021	0738	KT	X			AMSE2	N1	0.00	0.00	1	VOLUME: 1625.70
8	9894229-MSE02	08	A	02/18/2021	0738	KT		X	X	AMSE2	N1	0.00	0.00	1	VOLUME: 1612.80

Turnaround Time: 5 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Shipping Date: 2/18/2021 / FedEx 7729 4266 3077

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Gilbane Federal [redacted]

COC # KT-021821

21020836

Gilbane

Project Name: Hunters Point Shipyard, Parcel E RA Phase 2	Laboratory: ALS Laboratory Group, Cincinnati, OH	Event: Parcel E Phase 2 Air Monitoring
Project Number: J310000400	POC: [redacted]	
WBS Code: J310000400	Ship to: [redacted]	

Comments:

Equipment:

Code	Matrix
A	Air

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

	Event: Parcel E Phase 2 Air Monitoring					Analytical Test Method: CAAIR - Air PM10	E12 - Air Pb Mn Cu	N0500 - Air TSP								Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
	Sample ID		Matrix	Date	Time	Samp Init.	1	1	1													
1	Q0424228-MSE01	01	A	02/17/2021	0755	KT	X										AMSE1	N1	0.00	0.00	1	VOLUME: 1652.14
2	9894227-MSE01	02	A	02/17/2021	0755	KT		X	X								AMSE1	N1	0.00	0.00	1	VOLUME: 1682.27
3	Q0424229-MSE02	03	A	02/17/2021	0744	KT	X										AMSE2	N1	0.00	0.00	1	VOLUME: 1627.36
4	9894226-MSE02	04	A	02/17/2021	0744	KT		X	X								AMSE2	N1	0.00	0.00	1	VOLUME: 1624.69

Turnaround Time: 5 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	2/18/21	1400	FedEx	2/18/21	1400
			[redacted]	2/23/21	16:15
			✓ Custody Seal		

Shipping Date / Carrier / Airbill Number

Shipping Date: 2/18/2021 / FedEx 7729 4266 3077

Received by Laboratory: *(Signature, Date, Time)* **& condition**

05-Mar-2021

[redacted]
Gilbane Company
[redacted]
[redacted]

Re: **HPNS Parcel E RA Phase 2; J310000400** Work Order: **21021028**

Dear [redacted]

ALS Environmental received 4 samples on 25-Feb-2021 01:46 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 11.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

[redacted]
Electronically approved by: Rob Nieman

[redacted]
Project Manager

Report of Laboratory Analysis

ALS Environmental

Date: 05-Mar-21

Client: Gilbane Company
Project: HPNS Parcel E RA Phase 2; J310000400
Work Order: **21021028**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
21021028-01	Q0424233-MSE01	Filter		2/18/2021 14:17	2/25/2021 13:46	☐
21021028-02	9894230-MSE01	Filter		2/18/2021 14:17	2/25/2021 13:46	☐
21021028-03	Q0424232-MSE02	Filter		2/18/2021 13:55	2/25/2021 13:46	☐
21021028-04	9894231-MSE02	Filter		2/18/2021 13:55	2/25/2021 13:46	☐

ALS Environmental

Date: 05-Mar-21

Client:	Gilbane Company
Project:	HPNS Parcel E RA Phase 2; J310000400
Work Order:	21021028

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

All sampling information was provided by the client.

ALS Environmental

Date: *05-Mar-21*

Client: Gilbane Company
Project: HPNS Parcel E RA Phase 2; J310000400

Work Order: 21021028

Analytical Results

Lab ID: 21021028-01A
Client Sample ID: Q0424233-MSE01

Collection Date: 2/18/2021 2:17:00 PM
Matrix: FILTER

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **437030**	Analyst: **SRL**
Date Analyzed: 3/4/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**4.1**	**1.0**	**0.0093**	

Lab ID: 21021028-02A
Client Sample ID: 9894230-MSE01

Collection Date: 2/18/2021 2:17:00 PM
Matrix: FILTER

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **449710**	Analyst: **SRL**
Date Analyzed: 3/4/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**4.5**	**1.0**	**0.010**	
METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **449710**	Analyst: **SRL**
Date Analyzed: 3/4/2021 14:10		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**120**	**25**	**0.00028**	
Lead	ND	25	<0.000056	
Manganese	ND	25	<0.000056	

Lab ID: 21021028-03A
Client Sample ID: Q0424232-MSE02

Collection Date: 2/18/2021 1:55:00 PM
Matrix: FILTER

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **436490**	Analyst: **SRL**
Date Analyzed: 3/4/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**1.8**	**1.0**	**0.0042**	

Note:

ALS Environmental

Date: *05-Mar-21*

Client: Gilbane Company
Project: HPNS Parcel E RA Phase 2; J310000400

Work Order: 21021028

Analytical Results

Lab ID: 21021028-04A
Client Sample ID: 9894231-MSE02

Collection Date: 2/18/2021 1:55:00 PM
Matrix: FILTER

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **434140**	Analyst: **SRL**
Date Analyzed: 3/4/2021		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	**11**	**1.0**	**0.026**	
METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **434140**	Analyst: **SRL**
Date Analyzed: 3/4/2021 14:22		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**110**	**25**	**0.00026**	
Lead	ND	25	<0.000058	
Manganese	ND	25	<0.000058	

Note:

ALS Environmental

Date: 05-Mar-21

Client: Gilbane Company

QC BATCH REPORT

Work Order: 21021028

Project: HPNS Parcel E RA Phase 2; J310000400

Batch ID: **R189356** Instrument ID **BAL2** Method: **TSP**

DUP Sample ID: **21030033-02A DUP** Units: **mg/sample** Analysis Date: **3/4/2021**

Client ID: Run ID: **BAL2_210304A** SeqNo: **2409510** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total suspended particulate	27.4	1.0	0	0	0		27.65	0.908	20	

The following samples were analyzed in this batch: 21021028-02A 21021028-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21021028
Project: HPNS Parcel E RA Phase 2; J310000400

QC BATCH REPORT

Batch ID: **R189357** Instrument ID **BAL2** Method: **PM10**

DUP Sample ID: **21021028-03A DUP** Units: **mg/sample** Analysis Date: **3/4/2021**
Client ID: **Q0424232-MSE02** Run ID: **BAL2_210304B** SeqNo: **2409514** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Particulate as PM10	1.95	1.0	0	0	0		1.84	5.8	20	

The following samples were analyzed in this batch: 21021028-01A 21021028-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21021028
Project: HPNS Parcel E RA Phase 2; J310000400

QC BATCH REPORT

Batch ID: **72977** Instrument ID **ICP3** Method: **E12**

MBLK Sample ID: **MBLK-72977-72977** Units: **µg/sample** Analysis Date: **3/4/2021 01:58 PM**
Client ID: Run ID: **ICP3_210304A** SeqNo: **2408319** Prep Date: **3/4/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	ND	100								
Lead	ND	25								
Manganese	ND	100								

LCS Sample ID: **LCS-72977-72977** Units: **µg/sample** Analysis Date: **3/4/2021 02:02 PM**
Client ID: Run ID: **ICP3_210304A** SeqNo: **2408320** Prep Date: **3/4/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	422.7	100	450	0	93.9	75-125	0			
Lead	428.4	25	450	0	95.2	75-125	0			
Manganese	388.8	100	450	0	86.4	75-125	0			

LCSD Sample ID: **LCSD-72977-72977** Units: **µg/sample** Analysis Date: **3/4/2021 02:06 PM**
Client ID: Run ID: **ICP3_210304A** SeqNo: **2408321** Prep Date: **3/4/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	388.3	100	450	0	86.3	75-125	422.7	8.5	20	
Lead	402.4	25	450	0	89.4	75-125	428.4	6.24	20	
Manganese	358.9	100	450	0	79.8	75-125	388.8	8	20	

MS Sample ID: **21021028-02A MS** Units: **µg/sample** Analysis Date: **3/4/2021 02:14 PM**
Client ID: **9894230-MSE01** Run ID: **ICP3_210304A** SeqNo: **2408323** Prep Date: **3/4/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	542.7	100	450	123.9	93.1	75-125	0			
Lead	436.2	25	450	0.9468	96.7	75-125	0			
Manganese	393.5	100	450	7.029	85.9	75-125	0			

MSD Sample ID: **21021028-02A MSD** Units: **µg/sample** Analysis Date: **3/4/2021 02:18 PM**
Client ID: **9894230-MSE01** Run ID: **ICP3_210304A** SeqNo: **2408324** Prep Date: **3/4/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	487.8	100	450	123.9	80.9	75-125	542.7	10.7	20	
Lead	399.1	25	450	0.9468	88.5	75-125	436.2	8.89	20	
Manganese	359.9	100	450	7.029	78.4	75-125	393.5	8.91	20	

The following samples were analyzed in this batch: 21021028-02A 21021028-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 05-Mar-21

Client: Gilbane Company
Project: HPNS Parcel E RA Phase 2; J310000400
WorkOrder: **21021028**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
µg/sample	
mg/sample	

ALS Environmental

Sample Receipt Checklist

Client Name: **GILBANE-WALNUTCREEK** Date/Time Received: **25-Feb-21 13:46**

Work Order: **21021028** Received by: **SNH**

Checklist completed by [redacted] 26-Feb-21 Reviewed by: [redacted] 01-Mar-21

eSignature Date eSignature Date

Matrices: air

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):			
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

CHAIN-OF-CUSTODY RECORD

Gilbane Federal [redacted] 2/22/2021

COC # KT-022221

Gilbane

Project Name: Hunters Point Shipyard, Parcel E RA Phase 2	Laboratory: ALS Laboratory Group, Cincinnati, OH	Event: Parcel E Phase 2 Air Monitoring
Project Number: J310000400	POC [redacted]	
WBS Code: J310000400	Ship to: [redacted]	

Comments:

Equipment:

Code	Matrix
A	Air

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

Analytical Test Method

	CAAIR - Air PM10	E12 - Air Pb Mn Cu	N0500 - Air TSP
Event: Parcel E Phase 2 Air Monitoring	1	1	1

	Sample ID	Matrix	Date	Time	Samp Init.	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	Q0424233-MSE01	A	02/18/2021	1417	KT	AMSE1	N1	0.00	0.00	1	VOLUME: 437.03
2	9894230-MSE01	A	02/18/2021	1417	KT	AMSE1	N1	0.00	0.00	1	VOLUME: 449.71
3	Q0424232-MSE02	A	02/18/2021	1355	KT	AMSE2	N1	0.00	0.00	1	VOLUME: 436.49
4	9894231-MSE02	A	02/18/2021	1355	KT	AMSE2	N1	0.00	0.00	1	VOLUME: 434.14

Turnaround Time: 5 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	2/22/21	1400	FedEx	2/22/21	1400
			[redacted] 2/25/21		1340

Shipping Date / Carrier / Airbill Number

Shipping Date: 2/22/2021 / FedEx 7729 6317 1779

Received by Laboratory: *(Signature, Date, Time)* & condition

fedex - Custody Seal Box

16-Mar-2021

[redacted]
Gilbane Company
[redacted]
[redacted]

Re: **HPNS Parcel E RA Phase 2; J310000400** Work Order: **21030033**

Dear[redacted]

ALS Environmental received 4 samples on 01-Mar-2021 01:26 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 13.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

[redacted]
Electronically approved by: Rob Nieman

[redacted]
Project Manager

Report of Laboratory Analysis

ALS Environmental

Date: 16-Mar-21

Client: Gilbane Company
Project: HPNS Parcel E RA Phase 2; J310000400
Work Order: **21030033**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
21030033-01	Q0424234-MSE01	Air		2/25/2021 11:30	3/1/2021 13:26	☐
21030033-02	9894232-MSE01	Air		2/25/2021 11:30	3/1/2021 13:26	☐
21030033-03	Q0424235-MSE02	Air		2/25/2021 11:15	3/1/2021 13:26	☐
21030033-04	9764115-MSE02	Air		2/25/2021 11:15	3/1/2021 13:26	☐

Client:	Gilbane Company
Project:	HPNS Parcel E RA Phase 2; J310000400
Work Order:	21030033

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

All sampling information was provided by the client.

ALS Environmental

Date: *16-Mar-21*

Client: Gilbane Company
Project: HPNS Parcel E RA Phase 2; J310000400

Work Order: 21030033

Analytical Results

Lab ID: 21030033-01A
Client Sample ID: Q0424234-MSE01

Collection Date: 2/25/2021 11:30:00 AM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1760100**	Analyst: **SRL**
Date Analyzed: 3/4/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**17**	**1.0**	**0.0097**	

Lab ID: 21030033-02A
Client Sample ID: 9894232-MSE01

Collection Date: 2/25/2021 11:30:00 AM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1750920**	Analyst: **SRL**
Date Analyzed: 3/4/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Total suspended particulate	**28**	**1.0**	**0.016**	

METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1750920**	Analyst: **SRL**
Date Analyzed: 3/4/2021 14:26		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**340**	**25**	**0.19**	
Lead	ND	25	<0.014	
Manganese	**36**	**25**	**0.021**	

Lab ID: 21030033-03A
Client Sample ID: Q0424235-MSE02

Collection Date: 2/25/2021 11:15:00 AM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1787840**	Analyst: **SRL**
Date Analyzed: 3/4/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**32**	**1.0**	**0.018**	

Note:

ALS Environmental

Date: *16-Mar-21*

Client: Gilbane Company
Project: HPNS Parcel E RA Phase 2; J310000400

Work Order: 21030033

Analytical Results

Lab ID: 21030033-04A
Client Sample ID: 9764115-MSE02

Collection Date: 2/25/2021 11:15:00 AM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1808230**	Analyst: **SRL**
Date Analyzed: 3/4/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Total suspended particulate	**44**	**1.0**	**0.024**	

METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1808230**	Analyst: **SRL**
Date Analyzed: 3/4/2021 14:38		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**710**	**25**	**0.39**	
Lead	ND	25	<0.014	
Manganese	**35**	**25**	**0.020**	

Note:

ALS Environmental

Date: *16-Mar-21*

Client: Gilbane Company
Project: HPNS Parcel E RA Phase 2; J310000400

Work Order: 21030033

Analytical Results

Lab ID: 21030033-01A
Client Sample ID: Q0424234-MSE01

Collection Date: 2/25/2021 11:30:00 AM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1760100**	Analyst: **SRL**
Date Analyzed: 3/4/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**17**	**1.0**	**0.0097**	

Lab ID: 21030033-02A
Client Sample ID: 9894232-MSE01

Collection Date: 2/25/2021 11:30:00 AM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1750920**	Analyst: **SRL**
Date Analyzed: 3/4/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Total suspended particulate	**28**	**1.0**	**0.016**	

METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1750920**	Analyst: **SRL**
Date Analyzed: 3/4/2021 14:26		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**340**	**25**	**0.00019**	
Lead	ND	25	<0.000014	
Manganese	**36**	**25**	**0.000021**	

Lab ID: 21030033-03A
Client Sample ID: Q0424235-MSE02

Collection Date: 2/25/2021 11:15:00 AM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: **PM10**	Air Volume (L): **1787840**	Analyst: **SRL**
Date Analyzed: 3/4/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Particulate as PM10	**32**	**1.0**	**0.018**	

Note:

ALS Environmental

Date: *16-Mar-21*

Client: Gilbane Company
Project: HPNS Parcel E RA Phase 2; J310000400

Work Order: 21030033

Analytical Results

Lab ID: 21030033-04A
Client Sample ID: 9764115-MSE02

Collection Date: 2/25/2021 11:15:00 AM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: **TSP**	Air Volume (L): **1808230**	Analyst: **SRL**
Date Analyzed: 3/4/2021		Reporting Limit		
	mg/sample	mg/sample	**mg/m3**	
Total suspended particulate	**44**	**1.0**	**0.024**	

METALS BY EPA METHOD 12 MOD.		Method: **E12**	Air Volume (L): **1808230**	Analyst: **SRL**
Date Analyzed: 3/4/2021 14:38		Reporting Limit		
	µg/sample	µg/sample	**mg/m3**	
Copper	**710**	**25**	**0.00039**	
Lead	ND	25	<0.000014	
Manganese	**35**	**25**	**0.000020**	

Note:

ALS Environmental

Date: 16-Mar-21

Client: Gilbane Company

QC BATCH REPORT

Work Order: 21030033

Project: HPNS Parcel E RA Phase 2; J310000400

Batch ID: **R189356** Instrument ID: **BAL2** Method: **TSP**

DUP Sample ID: **21030033-02A DUP** Units: **mg/sample** Analysis Date: **3/4/2021**

Client ID: **9894232-MSE01** Run ID: **BAL2_210304A** SeqNo: **2409510** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total suspended particulate	27.4	1.0	0	0	0		27.65	0.908	20	

The following samples were analyzed in this batch: 21030033-02A 21030033-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21030033
Project: HPNS Parcel E RA Phase 2; J310000400

QC BATCH REPORT

Batch ID: **R189357** Instrument ID: **BAL2** Method: **PM10**

DUP Sample ID: **21021028-03A DUP** Units: **mg/sample** Analysis Date: **3/4/2021**
Client ID: Run ID: **BAL2_210304B** SeqNo: **2409514** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Particulate as PM10	1.95	1.0	0	0	0		1.84	5.8	20	

The following samples were analyzed in this batch: 21030033-01A 21030033-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 21030033
Project: HPNS Parcel E RA Phase 2; J310000400

QC BATCH REPORT

Batch ID: **72977** Instrument ID: **ICP3** Method: **E12**

MBLK Sample ID: **MBLK-72977-72977** Units: **µg/sample** Analysis Date: **3/4/2021 01:58 PM**
Client ID: Run ID: **ICP3_210304A** SeqNo: **2408319** Prep Date: **3/4/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	ND	100								
Lead	ND	25								
Manganese	ND	100								

LCS Sample ID: **LCS-72977-72977** Units: **µg/sample** Analysis Date: **3/4/2021 02:02 PM**
Client ID: Run ID: **ICP3_210304A** SeqNo: **2408320** Prep Date: **3/4/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	422.7	100	450	0	93.9	75-125	0			
Lead	428.4	25	450	0	95.2	75-125	0			
Manganese	388.8	100	450	0	86.4	75-125	0			

LCSD Sample ID: **LCSD-72977-72977** Units: **µg/sample** Analysis Date: **3/4/2021 02:06 PM**
Client ID: Run ID: **ICP3_210304A** SeqNo: **2408321** Prep Date: **3/4/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	388.3	100	450	0	86.3	75-125	422.7	8.5	20	
Lead	402.4	25	450	0	89.4	75-125	428.4	6.24	20	
Manganese	358.9	100	450	0	79.8	75-125	388.8	8	20	

MS Sample ID: **21021028-02A MS** Units: **µg/sample** Analysis Date: **3/4/2021 02:14 PM**
Client ID: Run ID: **ICP3_210304A** SeqNo: **2408323** Prep Date: **3/4/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	542.7	100	450	123.9	93.1	75-125	0			
Lead	436.2	25	450	0.9468	96.7	75-125	0			
Manganese	393.5	100	450	7.029	85.9	75-125	0			

MSD Sample ID: **21021028-02A MSD** Units: **µg/sample** Analysis Date: **3/4/2021 02:18 PM**
Client ID: Run ID: **ICP3_210304A** SeqNo: **2408324** Prep Date: **3/4/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	487.8	100	450	123.9	80.9	75-125	542.7	10.7	20	
Lead	399.1	25	450	0.9468	88.5	75-125	436.2	8.89	20	
Manganese	359.9	100	450	7.029	78.4	75-125	393.5	8.91	20	

The following samples were analyzed in this batch: 21030033-02A 21030033-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 16-Mar-21

Client: Gilbane Company
Project: HPNS Parcel E RA Phase 2; J310000400
WorkOrder: **21030033**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
µg/sample	
mg/sample	

ALS Environmental

Sample Receipt Checklist

Client Name: **GILBANE-WALNUTCREEK** Date/Time Received: **01-Mar-21 13:26**

Work Order: **21030033** Received by: **SNH**

Checklist completed by: [redacted] 02-Mar-21 Reviewed by: [redacted] 05-Mar-21

eSignature Date eSignature Date

Matrices: air

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):			
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

CHAIN-OF-CUSTODY RECORD

Gilbane Federal [redacted] Q 1123 0033

COC # KT-022521

Gilbane

Project Name: Hunters Point Shipyard, Parcel E RA Phase 2	Laboratory: ALS Laboratory Group, Cincinnati, OH	Event: Parcel E Phase 2 Air Monitoring
Project Number: J310000400	POC: [redacted]	
WBS Code: J310000400	Ship to: [redacted]	

Comments:

Equipment:

Code	Matrix
A	Air

Code	Container/Preservative
1	1x 250-mL, Plastic, 4 Degrees C
1	1x Envelope, None

	Event: Parcel E Phase 2 Air Monitoring					Analytical Test Method: CAAIR - Air PM10	E12 - Air Pb Mn Cu	N0500 - Air TSP											
						1	1	1											
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	Q0424234-MSE01	A	02/25/2021	1130	KT	X										AMSE1	N1	0.00	0.00	1	VOLUME: 1760.10
2	9894232-MSE01	A	02/25/2021	1130	KT		X	X								AMSE1	N1	0.00	0.00	1	VOLUME: 1750.92
3	Q0424235-MSE02	A	02/25/2021	1115	KT	X										AMSE2	N1	0.00	0.00	1	VOLUME: 1787.84
4	9764115-MSE02	A	02/25/2021	1115	KT		X	X								AMSE2	N1	0.00	0.00	1	VOLUME: 1808.23

Turnaround Time: NA

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	2/25/21	1200	FedEx	2/25/21	1200
			[redacted]	3/1/21	1300

Shipping Date / Carrier / Airbill Number

Shipping Date: 2/25/2021 FedEx

7730 0568 6134

Received by Laboratory: *(Signature, Date, Time)* **& condition**

fedex - Custody Seal

Laboratory Analysis Report

Job ID : 21020498

[redacted]

Client Project Name :
HPNS Parcel E RA Phase II J310000400

Report To :	Client Name:	Gilbane	Total Number of Pages:	5
	Attn:	[redacted]	P.O.#. :	J310000100-014
	Client Address:	[redacted]	Date Received :	02/05/2021 09:40
	City, State, Zip:	[redacted]	Sample Collected By :	[redacted]

A&B Labs has analyzed the following samples...

Client Sample ID	Sample Collection Date & Time	Matrix	A&B Job Sample ID
MSE01-020121	2/1/2021 15:41	Cassette	21020498.01
MSE02-020121	2/1/2021 15:45	Cassette	21020498.02
MSE01-020221	2/2/2021 15:21	Cassette	21020498.03
MSE02-020221	2/2/2021 15:18	Cassette	21020498.04

[redacted]

Released By: [redacted]

Title: Vice President Operations

Analyst: [redacted]

2/12/2021

ANALYSIS OF AIRBORNE FIBER SAMPLING
SAMPLING PERFORMED BY CLIENT
ANALYSIS CONDUCTED BY A & B ENVIRONMENTAL SERVICES, INC.

[redacted]

Date 2/12/2021

Job ID : 21020498
Analytical Method: NIOSH 7400-I2-Aug1994

Client: Gilbane | Project: HPNS Parcel E RA Phase II J310000400 | Attn: Brett Womack

A&B Sample ID	Client Sample ID	Collected Date	Area/Person	Flow Rate L/m	Time On	Time Off	Total Time (min)	Volume (Liters)	Total Fields	Total Fibers	F/mm2	Fiber/cc	8 Hour TWA	Analysis Date	Analyzed By
21020498.01	MSE01-020121	02/01/2021	Area	2			631	1262	100	14.5	18.471	0.006		02/12/21	Habedi
21020498.02	MSE02-020121	02/01/2021	Area	2			630	1260	100	14.5	18.471	0.006		02/12/21	Habedi
21020498.03	MSE01-020221	02/02/2021	Area	2			781	1562	100	9.0	11.465	0.003		02/12/21	Habedi
21020498.04	MSE02-020221	02/02/2021	Area	2			713	1426	100	9.0	11.465	0.003		02/12/21	Habedi

Detection limit of this method is estimated at 7 f/mm2 (5.5 fibers per 100 fields)

Intralaboratory Sr 5-20:0.06 20-50:0.04 50-100:0.02

Sample Condition Checklist

A&B JobID : **21020498**	Date Received : **02/05/2021**	Time Received : **9:40AM**
Client Name : **Gilbane**		
Temperature : **19.8°C**	Sample pH : **na**	
Thermometer ID : **102002320**	pH Paper ID : **na**	
Perservative :		

	Check Points	Yes	No	N/A
1.	**Cooler seal present and signed.**	X		
2.	**Sample(s) in a cooler.**		X	
3.	**If yes, ice in cooler.**			X
4.	**Sample(s) received with chain-of-custody.**	X		
5.	**C-O-C signed and dated.**	X		
6.	**Sample(s) received with signed sample custody seal.**		X	
7.	**Sample containers arrived intact. (If no comment).**	X		
8.	**Matrix :** **Water** ☐ **Soil** ☐ **Liquid** ☐ **Sludge** ☐ **Solid** ☐ **Cassette** ☑ **Tube** ☐ **Bulk** ☐ **Badge** ☐ **Food** ☐ **Other** ☐			
9.	**Sample(s) were received in appropriate container(s).**	X		
10.	**Sample(s) were received with proper preservative**			X
11.	**All samples were logged or labeled.**	X		
12.	**Sample ID labels match C-O-C ID's**	X		
13.	**Bottle count on C-O-C matches bottles found.**	X		
14.	**Sample volume is sufficient for analyses requested.**	X		
15.	**Samples were received within the hold time.**	X		
16.	**VOA vials completely filled.**			X
17.	**Sample accepted.**	X		
18	**Has client been contacted about sub-out**			X

Comments : Include actions taken to resolve discrepancies/problem:

Received in box with custody seal

Received by : [redacted]

Check in by/date : [redacted] / 02/05/2021

Phone [redacted]

Event ID: Air Monitoring

COC# KT-020321ASB

Gilbane

Chain-Of-Custody

Project Name and Number: HPNS Parcel E RA Phase II J310000400
Project Manager: [redacted]
Site Location: Hunters Point, San Francisco, CA 94124

Laboratory Name: A&B Labs
Address: [redacted]
Contact Name: [redacted]
Phone: [redacted]

Date: 2/04/2021
Page: 1 of 1

Analysis: Asbestos — Preservative: None — Container Type: Filter

Sample ID	Date	Time	Sample Depth (top)	Sample Depth (bottom)	No. of Containers	Sample Matrix	Asbestos	Special Instructions/Comments FLOW RATE 2 M	
								Time (min)	
MSE01-020121	2/1/21	1541	NA	NA	1	AA	X	631	01A
MSE02-020121	2/1/21	1545	↓	↓	↓	↓	X	630	02A
MSE01-020221	2/2/21	1521	↓	↓	↓	↓	X	781	03A
MSE02-020221	2/2/21	1518	↓	↓	↓	↓	X	713	04A

Job ID:21020498

Sampled By: [redacted]
Signature:
Special Instructions: None
19.8°C 1102FF2320
Send Results to: [redacted]
Turnaround Time:

Sampler: [redacted]

Courier/Airbill No.: FedEX/ 7728 0722 9694

Relinquished By/Affiliation:	Date:	Time:	Received By/ Affiliation:	Date:	Time:
[redacted]	2/3/21	1600	Fed Ex	2/4/21	1600
Fedex	2.5.21	940	Amanda	2.5.21	940

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Laboratory Analysis Report

Job ID : 21020798

[redacted]

Client Project Name :
HPNS Parcel E Phase II J310000400

Report To :	Client Name:	Gilbane	Total Number of Pages:	5
	Attn:	[redacted]	P.O.#. :	J310000400-015
	Client Address:	[redacted]	Date Received :	02/10/2021 10:28
	City, State, Zip:	[redacted]	Sample Collected By :	[redacted]

A&B Labs has analyzed the following samples...

Client Sample ID	Sample Collection Date & Time	Matrix	A&B Job Sample ID
MSE01-020821	2/8/2021 15:36	Cassette	21020798.01
MSE02-020821	2/8/2021 15:22	Cassette	21020798.02

[redacted]

Released By: [redacted]

Title: Vice President Operations

Analyst: [redacted]

2/18/2021

ANALYSIS OF AIRBORNE FIBER SAMPLING
SAMPLING PERFORMED BY CLIENT
ANALYSIS CONDUCTED BY A & B ENVIRONMENTAL SERVICES, INC.

[redacted]

Date 2/18/2021

Job ID : 21020798
Analytical Method: NIOSH 7400-I2-Aug1994

Client: Gilbane | Project: HPNS Parcel E Phase II J310000400 | Attn: Brett Womack

A&B Sample ID	Client Sample ID	Collected Date	Area/Person	Flow Rate L/m	Time On	Time Off	Total Time (min)	Volume (Liters)	Total Fields	Total Fibers	F/mm2	Fiber/cc	8 Hour TWA	Analysis Date	Analyzed By
21020798.01	MSE01-020821	02/08/2021	Area	2			432	864	100	15.0	19.108	0.009		02/18/21	Habedi
21020798.02	MSE02-020821	02/08/2021	Area	2			382	764	100	10.0	12.739	0.006		02/18/21	Habedi

Detection limit of this method is estimated at 7 f/mm2 (5.5 fibers per 100 fields)

Intralaboratory Sr 5-20:0.06 20-50:0.04 50-100:0.02

Sample Condition Checklist

A&B JobID : **21020798**	Date Received : **02/10/2021**	Time Received : **10:28AM**
Client Name : **Gilbane**		
Temperature : **2°C**	Sample pH : **NA**	
Thermometer ID : **102002320**	pH Paper ID : **NA**	
Perservative :		

	Check Points	Yes	No	N/A
1.	**Cooler seal present and signed.**	X		
2.	**Sample(s) in a cooler.**		X	
3.	**If yes, ice in cooler.**		X	
4.	**Sample(s) received with chain-of-custody.**	X		
5.	**C-O-C signed and dated.**	X		
6.	**Sample(s) received with signed sample custody seal.**		X	
7.	**Sample containers arrived intact. (If no comment).**	X		
8.	**Matrix :** **Water** ☐ **Soil** ☐ **Liquid** ☐ **Sludge** ☐ **Solid** ☐ **Cassette** ☑ **Tube** ☐ **Bulk** ☐ **Badge** ☐ **Food** ☐ **Other** ☐			
9.	**Sample(s) were received in appropriate container(s).**	X		
10.	**Sample(s) were received with proper preservative**			X
11.	**All samples were logged or labeled.**	X		
12.	**Sample ID labels match C-O-C ID's**	X		
13.	**Bottle count on C-O-C matches bottles found.**	X		
14.	**Sample volume is sufficient for analyses requested.**	X		
15.	**Samples were received within the hold time.**	X		
16.	**VOA vials completely filled.**			X
17.	**Sample accepted.**	X		
18	**Has client been contacted about sub-out**			X

Comments : Include actions taken to resolve discrepancies/problem:

Received in box with custody seal

Received by : [redacted]

Check in by/date : [redacted] / 02/10/2021

Phone : [redacted]

Event ID: Air Monitoring

COC# KT-020921ASB

Gilbane

Chain-Of-Custody

Project Name and Number: HPNS Parcel E Phase II J310000400
Project Manager: [redacted]
Site Location: [redacted]

Laboratory Name: A&B Labs
Address: [redacted]
Contact Name [redacted]
Phone: [redacted]

Date: 01/27/2021 2/9/21 18
Page: 1 of 1

Sample ID	Date	Time	Sample Depth (top)	Sample Depth (bottom)	No. of Containers	Sample Matrix	Asbestos	Special Instructions/Comments
							Analysis: Asbestos; Preservative: None; Container Type: Filter	Flow rate = 2 L/min; Total time (min)
MSE01-020821 OIA	2/8/21	1536	NA	NA	1	AA	X	H:5712 432
MSE02-020821 URA	2/8/21	1522	NA	NA	1	AA	X	H:622 382

2/9/21

Job ID:21020798

Sampled By: [redacted]
Signature:
Special Instructions:
21.4°C 1020232O

Send Results to: [redacted]

Turnaround Time: Standard

Sampler: [redacted]

Courier/Airbill No.: FedEX / 7728 6564 5271

Relinquished By/Affiliation:	Date:	Time:	Received By/ Affiliation:	Date:	Time:
[redacted]	2/9/21	1400	FedEx	2/9/21	1400
FedEx	2.10.21	1028	Amanda	2.10.21	1028

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Laboratory Analysis Report

Job ID : 21021068

[redacted]

Client Project Name :
HPNS Parcel E Phase II J310000400

Report To :	Client Name:	Gilbane	Total Number of Pages:	4
	Attn:	[redacted]	P.O.#. :	J310000-015
	Client Address:	[redacted]	Date Received :	02/12/2021 13:30
	City, State, Zip:	[redacted]	Sample Collected By :	[redacted]

A&B Labs has analyzed the following samples...

Client Sample ID	Sample Collection Date & Time	Matrix	A&B Job Sample ID
MSE01-020921	2/9/2021 15:45	Cassette	21021068.01
MSE02-020921	2/9/2021 15:32	Cassette	21021068.02
MSE01-021021	2/10/2021 15:32	Cassette	21021068.03
MSE02-021021	2/10/2021 15:29	Cassette	21021068.04

[redacted]

Released By: [redacted]

Title: Vice President Operations

Analyst: [redacted]

2/18/2021

ANALYSIS OF AIRBORNE FIBER SAMPLING
SAMPLING PERFORMED BY CLIENT
ANALYSIS CONDUCTED BY A & B ENVIRONMENTAL SERVICES, INC.

[redacted]

Date 2/18/2021

Job ID : 21021068
Analytical Method: NIOSH 7400-I2-Aug1994

Client: Gilbane | Project: HPNS Parcel E Phase II J310000400 | Attn: Brett Womack

A&B Sample ID	Client Sample ID	Collected Date	Area/Person	Flow Rate L/m	Time On	Time Off	Total Time (min)	Volume (Liters)	Total Fields	Total Fibers	F/mm2	Fiber/cc	8 Hour TWA	Analysis Date	Analyzed By
21021068.01	MSE01-020921	02/09/2021	Area	2			473	946	100	12.0	15.287	0.006		02/18/21	Habedi
21021068.02	MSE02-020921	02/09/2021	Area	2			447	894	100	10.5	13.376	0.006		02/18/21	Habedi
21021068.03	MSE01-021021	02/10/2021	Area	2			467	934	100	10.5	13.376	0.006		02/18/21	Habedi
21021068.04	MSE02-021021	02/10/2021	Area	2			449	898	100	9.5	12.102	0.005		02/18/21	Habedi

Detection limit of this method is estimated at 7 f/mm2 (5.5 fibers per 100 fields)

Intralaboratory Sr 5-20:0.06 20-50:0.04 50-100:0.02

Sample Condition Checklist

A&B JobID : **21021068**	Date Received : **02/12/2021**	Time Received : **1:30PM**
Client Name : **Gilbane**		
Temperature : **15.8°C**	Sample pH : **N/A**	
Thermometer ID : **102002320**	pH Paper ID : **N/A**	
Perservative :		

	Check Points	Yes	No	N/A
1.	**Cooler seal present and signed.**			X
2.	**Sample(s) in a cooler.**		X	
3.	**If yes, ice in cooler.**			X
4.	**Sample(s) received with chain-of-custody.**	X		
5.	**C-O-C signed and dated.**	X		
6.	**Sample(s) received with signed sample custody seal.**		X	
7.	**Sample containers arrived intact. (If no comment).**	X		
8.	**Matrix :** **Water** ☐ **Soil** ☐ **Liquid** ☐ **Sludge** ☐ **Solid** ☐ **Cassette** ☑ **Tube** ☐ **Bulk** ☐ **Badge** ☐ **Food** ☐ **Other** ☐			
9.	**Sample(s) were received in appropriate container(s).**	X		
10.	**Sample(s) were received with proper preservative**			X
11.	**All samples were logged or labeled.**	X		
12.	**Sample ID labels match C-O-C ID's**	X		
13.	**Bottle count on C-O-C matches bottles found.**	X		
14.	**Sample volume is sufficient for analyses requested.**	X		
15.	**Samples were received within the hold time.**	X		
16.	**VOA vials completely filled.**			X
17.	**Sample accepted.**	X		
18	**Has client been contacted about sub-out**			X

Comments : Include actions taken to resolve discrepancies/problem:

Received by : [redacted]

Check in by/date : [redacted] 02/12/2021

Phone : [redacted]

[redacted]

Event ID: Air Monitoring

COC# KT021121-ASB

Gilbane Chain-Of-Custody

Project Name and Number: HPNS Parcel E Phase II J310000400

Project Manager: [redacted]

Site Location: [redacted]

Laboratory Name: A&B Labs

Address: [redacted]

Contact Name: [redacted]

Phone: [redacted]

Date: 2/11/21

Page: 1 of 1

Analysis:

* Job ID:21021068

Preservative: None

Container Type: Filter

Sample ID	Date	Time	Sample Depth (top)	Sample Depth (bottom)	No. of Containers	Sample Matrix	Asbestos	Special Instructions/Comments
MSE01-020921	2/9/21	1545	NA	NA	1	AA	X	TOTAL TIME (MIN) 473 01A
MSE02-020921	2/9/21	1532	↓	↓	↓	↓	X	447 02A
MSE01-021021	2/10/21	1532					X	467 03A
MSE02-021021	2/10/21	1529					X	449 04A

FLOW RATE: 2 L/MIN

Sampled By: [redacted]

Signature:

Special Instructions: None

Send Results to: [redacted]

Turnaround Time: Standard

Sampler: [redacted]

Courier/Airbill No.: FedEX/ 7728 8924 9056

Relinquished By/Affiliation:	Date:	Time:	Received By/ Affiliation:	Date:	Time:
[redacted] FedEx	2/11/21	1400	FedEx	2/11/21	1400
				2-12-21	1330

15.3.6 increase NE/CS

Laboratory Analysis Report

Job ID : 21021244

[redacted]

Client Project Name :
HPNS Parcel E Phase II J310000-400

Report To :	Client Name:	Gilbane	Total Number of Pages:	4
	Attn:	[redacted]	P.O.#. :	J310000-015
	Client Address:	[redacted]	Date Received :	02/19/2021 16:30
	City, State, Zip:	[redacted]	Sample Collected By :	[redacted]

A&B Labs has analyzed the following samples...

Client Sample ID	Sample Collection Date & Time	Matrix	A&B Job Sample ID
MSE01-021121	2/11/2021 13:58	Cassette	21021244.01
MSE02-021121	2/11/2021 14:10	Cassette	21021244.02

[redacted]

Released By: [redacted]

Title: Project Manager

Analyst: [redacted]

2/26/2021

ANALYSIS OF AIRBORNE FIBER SAMPLING
SAMPLING PERFORMED BY CLIENT
ANALYSIS CONDUCTED BY A & B ENVIRONMENTAL SERVICES, INC.

[redacted]

Date 2/26/2021

Job ID : 21021244
Analytical Method: NIOSH 7400-I2-Aug1994

Client: Gilbane | Project: HPNS Parcel E Phase II J310000-400 | Attn: Brett Womack

A&B Sample ID	Client Sample ID	Collected Date	Area/Person	Flow Rate L/m	Time On	Time Off	Total Time (min)	Volume (Liters)	Total Fields	Total Fibers	F/mm2	Fiber/cc	8 Hour TWA	Analysis Date	Analyzed By
21021244.01	MSE01-021121	02/11/2021	Area	2			346	692	100	11.5	14.650	0.008		02/26/21	Habedi
21021244.02	MSE02-021121	02/11/2021	Area	2			370	740	100	11.5	14.650	0.008		02/26/21	Habedi

Detection limit of this method is estimated at 7 f/mm2 (5.5 fibers per 100 fields)

Intralaboratory Sr 5-20:0.06 20-50:0.04 50-100:0.02

Sample Condition Checklist

A&B JobID : **21021244**	Date Received : **02/19/2021**	Time Received : **4:30PM**
Client Name : **Gilbane**		
Temperature : **10.9°C**	Sample pH : **N/A**	
Thermometer ID : **102002320**	pH Paper ID : **N/A**	
Perservative :		

	Check Points	Yes	No	N/A
1.	**Cooler seal present and signed.**	X		
2.	**Sample(s) in a cooler.**		X	
3.	**If yes, ice in cooler.**			X
4.	**Sample(s) received with chain-of-custody.**	X		
5.	**C-O-C signed and dated.**	X		
6.	**Sample(s) received with signed sample custody seal.**		X	
7.	**Sample containers arrived intact. (If no comment).**	X		
8.	**Matrix :** **Water** ☐ **Soil** ☐ **Liquid** ☐ **Sludge** ☐ **Solid** ☐ **Cassette** ☑ **Tube** ☐ **Bulk** ☐ **Badge** ☐ **Food** ☐ **Other** ☐			
9.	**Sample(s) were received in appropriate container(s).**	X		
10.	**Sample(s) were received with proper preservative**			X
11.	**All samples were logged or labeled.**	X		
12.	**Sample ID labels match C-O-C ID's**	X		
13.	**Bottle count on C-O-C matches bottles found.**	X		
14.	**Sample volume is sufficient for analyses requested.**	X		
15.	**Samples were received within the hold time.**	X		
16.	**VOA vials completely filled.**			X
17.	**Sample accepted.**	X		
18	**Has client been contacted about sub-out**			X

Comments : Include actions taken to resolve discrepancies/problem:

Received in box with C/S.

Received by : [redacted]

Check in by/date : [redacted] 02/19/2021

Phone : [redacted] [redacted]

Event ID: Air Monitoring

COC# KT021621

Gilbane

Chain-Of-Custody

Project Name and Number: HPNS Parcel E Phase II J310000400

Project Manager: [redacted]

Site Location: [redacted]

Laboratory Name: A&B Labs

Address: [redacted]

Contact Name: [redacted]

Phone: [redacted]

Date: 2/16/21

Page: 1 of 1

Analysis:

Sample ID	Date	Time	Sample Depth (top)	Sample Depth (bottom)	No. of Containers	Sample Matrix	Asbestos	Preservative / Container Type	Special Instructions/Comments
MSE01-021121	2/11/21	1358	NA	NA	1	AA	X	None / Filter	Flow rate = 2 L/min; Total time (min) 346
MSE02-021121	2/11/21	1410	NA	NA	1	AA	X	None / Filter	360 370

* Job ID:21021244

Sampled By: [redacted]

Signature: [redacted]

Special Instructions: None

Send Results to: [redacted]

Turnaround Time: Standard

Sampler: [redacted]

Relinquished By/Affiliation:	Date:	Time:	Received By/ Affiliation:	Date:	Time:
[redacted]	2/16/21		FedEx	2/16/21 2-17-21	1630

Courier/Airbill No.: FedEX/

10.9 C

1020236

Laboratory Analysis Report

Job ID : 21021389

[redacted]

Client Project Name :
HPNS Parcel E Phase II J310000400

Report To :	Client Name:	Gilbane	Total Number of Pages:	5
	Attn:	[redacted]	P.O.#. :	J310000400-015
	Client Address:	[redacted]	Date Received :	02/22/2021 09:00
	City, State, Zip:	[redacted]	Sample Collected By :	[redacted]

A&B Labs has analyzed the following samples...

Client Sample ID	Sample Collection Date & Time	Matrix	A&B Job Sample ID
MSE01-021621	2/16/2021 15:36	Cassette	21021389.01
MSE02-021621	2/16/2021 15:22	Cassette	21021389.02
MSE01-021721	2/17/2021 15:37	Cassette	21021389.03
MSE02-021721	2/17/2021 15:32	Cassette	21021389.04

[redacted]

Released By: [redacted]

Title: Vice President Operations

Analyst: [redacted]

2/26/2021

ANALYSIS OF AIRBORNE FIBER SAMPLING
SAMPLING PERFORMED BY CLIENT
ANALYSIS CONDUCTED BY A & B ENVIRONMENTAL SERVICES, INC.

[redacted]

Date 2/26/2021

Job ID : 21021389
Analytical Method: NIOSH 7400-I2-Aug1994

Client: Gilbane | Project: HPNS Parcel E Phase II J310000400 | Attn: Brett Womack

A&B Sample ID	Client Sample ID	Collected Date	Area/Person	Flow Rate L/m	Time On	Time Off	Total Time (min)	Volume (Liters)	Total Fields	Total Fibers	F/mm2	Fiber/cc	8 Hour TWA	Analysis Date	Analyzed By
21021389.01	MSE01-021621	02/16/2021	Area	2.0			471	942	100	10.5	13.376	0.005		02/26/21	Habedi
21021389.02	MSE02-021621	02/16/2021	Area	2.0			467	934	100	11.0	14.013	0.006		02/26/21	Habedi
21021389.03	MSE01-021721	02/17/2021	Area	2.0			462	924	100	12.5	15.924	0.007		02/26/21	Habedi
21021389.04	MSE02-021721	02/17/2021	Area	2.0			465	930	100	12	15.287	0.006		02/26/21	Habedi

Detection limit of this method is estimated at 7 f/mm2 (5.5 fibers per 100 fields)

Intralaboratory Sr 5-20:0.06 20-50:0.04 50-100:0.02

Sample Condition Checklist

A&B JobID : **21021389**	Date Received : **02/22/2021**	Time Received : **9:00AM**
Client Name : **Gilbane**		
Temperature : **19.0°C**	Sample pH : **n/a**	
Thermometer ID : **102002320**	pH Paper ID : **n/a**	
Perservative :		

	Check Points	Yes	No	N/A
1.	**Cooler seal present and signed.**	X		
2.	**Sample(s) in a cooler.**		X	
3.	**If yes, ice in cooler.**			X
4.	**Sample(s) received with chain-of-custody.**	X		
5.	**C-O-C signed and dated.**	X		
6.	**Sample(s) received with signed sample custody seal.**		X	
7.	**Sample containers arrived intact. (If no comment).**	X		
8.	**Matrix :** **Water** ☐ **Soil** ☐ **Liquid** ☐ **Sludge** ☐ **Solid** ☐ **Cassette** ☑ **Tube** ☐ **Bulk** ☐ **Badge** ☐ **Food** ☐ **Other** ☐			
9.	**Sample(s) were received in appropriate container(s).**	X		
10.	**Sample(s) were received with proper preservative**			X
11.	**All samples were logged or labeled.**	X		
12.	**Sample ID labels match C-O-C ID's**	X		
13.	**Bottle count on C-O-C matches bottles found.**	X		
14.	**Sample volume is sufficient for analyses requested.**	X		
15.	**Samples were received within the hold time.**	X		
16.	**VOA vials completely filled.**			X
17.	**Sample accepted.**	X		
18	**Has client been contacted about sub-out**			X

Comments : Include actions taken to resolve discrepancies/problem:

Received by : [redacted]

Check in by/date : [redacted] / 02/22/2021

Phone : [redacted]

[redacted]

Event ID: Air Monitoring

Job ID:21021389

COC# KT021821-A&B

Gilbane

Chain-Of-Custody

Project Name and Number: HPNS Parcel E Phase II J310000400

Project Manager: [redacted]

Site Location: [redacted]

Laboratory Name: A&B Labs

Address: [redacted]

Contact Name: [redacted]

Phone: [redacted]

Date: 2/18/21

Page: 1 of 1

Sample ID	Date	Time	Sample Depth (top)	Sample Depth (bottom)	No. of Containers	Sample Matrix	Asbestos	Analysis: Preservative: None; Container Type: Filter	Special Instructions/Comments: Flow rate = 2 L/min; total time (min)
MSE01-021621	2/16/21	1536	NA	NA	1	AA	X		471
MSE02-021621	2/16/21	1522					X		447
MSE01-021721	2/17/21	1537					X		462
MSE02-021721	2/17/21	1532					X		465

HM

Sampled By: [redacted]

Signature: [redacted]

Special Instructions: None

Send Results to: [redacted]

Turnaround Time: Standard

Sampler: [redacted]

Courier/Airbill No.: FedEX/ 7729 3704 3827

Relinquished By/Affiliation:	Date:	Time:	Received By/ Affiliation:	Date:	Time:
[redacted]	2/18/21	1400	Fed Ex	2/18/21	1400
			Dropbox	2-22-21	900

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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CUSTODY SEAL

Person Collecting Sample _____ (signature) Sample No. _____

Date Collected 2/18/21 Time Collected _____

Laboratory Analysis Report

Job ID : 21030289

[redacted]

Client Project Name :
HPNS Parcel E Phase II J310000400

Report To :	Client Name:	Gilbane	Total Number of Pages:	4
	Attn:	[redacted]	P.O.#. :	J310000400-0015
	Client Address:	[redacted]	Date Received :	03/03/2021 13:30
	City, State, Zip:	[redacted]	Sample Collected By :	[redacted]

A&B Labs has analyzed the following samples...

Client Sample ID	Sample Collection Date & Time	Matrix	A&B Job Sample ID
MSE01-022521	2/25/2021 11:40	Cassette	21030289.01
MSE02-022521	2/25/2021 11:42	Cassette	21030289.02
MSE01-030121	3/1/2021 15:42	Cassette	21030289.03
MSE02-030121	3/1/2021 15:46	Cassette	21030289.04

[redacted]

Released By: [redacted]

Title: Vice President Operations

Analyst: [redacted]

3/8/2021

ANALYSIS OF AIRBORNE FIBER SAMPLING
SAMPLING PERFORMED BY CLIENT
ANALYSIS CONDUCTED BY A & B ENVIRONMENTAL SERVICES, INC.

[redacted]

Date 3/8/2021

Job ID : 21030289
Analytical Method: NIOSH 7400-I2-Aug1994

Client: Gilbane | Project: HPNS Parcel E Phase II J310000400 | Attn: Brett Womack

A&B Sample ID	Client Sample ID	Collected Date	Area/Person	Flow Rate L/m	Time On	Time Off	Total Time (min)	Volume (Liters)	Total Fields	Total Fibers	F/mm2	Fiber/cc	8 Hour TWA	Analysis Date	Analyzed By
21030289.01	MSE01-022521	02/25/2021	Area	2			290	580	100	8.5	10.828	0.007		03/08/21	Habedi
21030289.02	MSE02-022521	02/25/2021	Area	2			279	558	100	9	11.465	0.008		03/08/21	Habedi
21030289.03	MSE01-030121	03/01/2021	Area	2			462	924	100	10.0	12.739	0.005		03/08/21	Habedi
21030289.04	MSE02-030121	03/01/2021	Area	2			442	884	100	10.5	13.376	0.006		03/08/21	Habedi

Detection limit of this method is estimated at 7 f/mm2 (5.5 fibers per 100 fields)

Intralaboratory Sr 5-20:0.06 20-50:0.04 50-100:0.02

Sample Condition Checklist

A&B JobID : **21030289**	Date Received : **03/03/2021**	Time Received : **1:30PM**
Client Name : **Gilbane**		
Temperature : **18.3°C**	Sample pH : **N/A**	
Thermometer ID : **102002320**	pH Paper ID : **N/A**	
Perservative :		

	Check Points	Yes	No	N/A
1.	**Cooler seal present and signed.**	X		
2.	**Sample(s) in a cooler.**		X	
3.	**If yes, ice in cooler.**			X
4.	**Sample(s) received with chain-of-custody.**	X		
5.	**C-O-C signed and dated.**	X		
6.	**Sample(s) received with signed sample custody seal.**		X	
7.	**Sample containers arrived intact. (If no comment).**	X		
8.	**Matrix :** **Water** ☐ **Soil** ☐ **Liquid** ☐ **Sludge** ☐ **Solid** ☐ **Cassette** ☑ **Tube** ☐ **Bulk** ☐ **Badge** ☐ **Food** ☐ **Other** ☐			
9.	**Sample(s) were received in appropriate container(s).**	X		
10.	**Sample(s) were received with proper preservative**			X
11.	**All samples were logged or labeled.**	X		
12.	**Sample ID labels match C-O-C ID's**	X		
13.	**Bottle count on C-O-C matches bottles found.**	X		
14.	**Sample volume is sufficient for analyses requested.**	X		
15.	**Samples were received within the hold time.**	X		
16.	**VOA vials completely filled.**			X
17.	**Sample accepted.**	X		
18	**Has client been contacted about sub-out**			X

Comments : Include actions taken to resolve discrepancies/problem:

C/S on box.

Received by : [redacted]

Check in by/date : [redacted]/ 03/03/2021

Phone : [redacted]

[redacted]

Event ID: Air Monitoring

COC# KT030221ASD

Gilbane

Chain-Of-Custody

Project Name and Number: HPNS Parcel E Phase II J310000400

Project Manager: [redacted]

Site Location: Hunters Point, San Francisco, CA 94124

Laboratory Name: A&B Labs

Address: [redacted]

Contact Name: [redacted]

Phone: [redacted]

Date: 3/4/21

Page: 1 of 1

Analysis:

Preservative: None

Container Type: Filter

Sample ID	Date	Time	Sample Depth (top)	Sample Depth (bottom)	No. of Containers	Sample Matrix	Asbestos	Special Instructions/Comments
MSE01-022521	2/25/21	1140	NA	NA	1	AIR	X	Flow rate = 2 L/min; Total volume (min): 290 OA
MSE02-022521	2/25/25	1142	↓	↓	↓	↓	X	279 OA
MSE01-030121	3/1/21	1542	↓	↓	↓	↓	X	462 OA
MSE02-030121	3/1/21	1546	↓	↓	↓	↓	X	442 OA

* Job ID:21030289

Sampled By: [redacted]

Signature:

Special Instructions:

Send Results to: [redacted]

Turnaround Time: Standard

Sampler: [redacted]

Relinquished By/Affiliation:	Date:	Time:
[redacted]	3/4/21	1400

Courier/Airbill No.: FedEX/ 7730 3818 9870

Received By/ Affiliation:	Date:	Time:
Fed Ex	3/4/21	1400
[redacted]	3/5/21	1330

N.S

18.3°C 102002320